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THOMAS ELMER WILL

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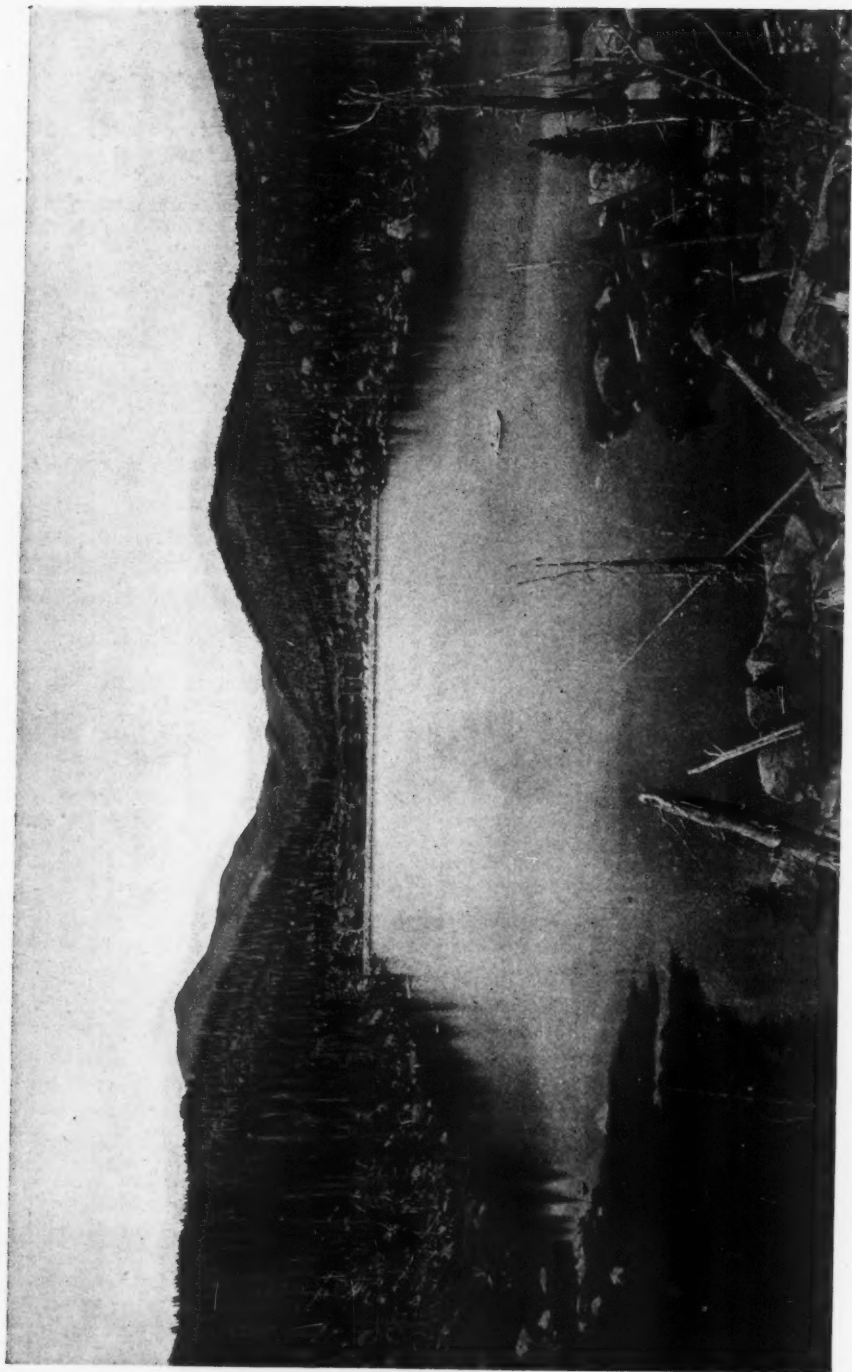
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Work of fire in forest bordering mountain lake

FORESTRY AND IRRIGATION

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EDITORIAL

Preserving Our Heritage

Noteworthy words were those uttered by President Roosevelt in his Jamestown address on June 10. In speaking of the reclamation of arid lands, the preservation of the waters which head in the Rocky Mountains that they may be of the highest service to the people as a whole, the development and utilization of our inland waterways as channels of traffic and the protection of the natural resources of the public lands—our coal, oil, gas, water, and forage—from fraud, waste, and encroachment, he said:

"They are connected together into one great, fundamental problem—that of the conservation of all our natural resources. Upon the wise solution of this, much of our future obviously depends. Even such questions as the regulation of railway rates and the control of corporations are in reality subsidiary to the primal problem of the preservation in the interests of the whole people of the resources that nature has given us. If we fail to solve this problem, no skill in solving the others will in the end avail us very greatly."

The propriety in thus grouping this assemblage of vital public interests is obvious. The necessity of thus guarding them is indisputable. Some of these having to do with public lands, and the others with interstate questions, the Nation is, without question, the one agency which, if they are to be considered at all in behalf of the public, must assume the responsibility for their consideration. To permit utilities of such magnitude to be abandoned to private greed and public neglect, and to assume that in matters of such far-reaching moment everybody's business is nobody's business, would be unpardonable. The planet on which we live constitutes the people's heritage. That portion of it lying within the jurisdiction of the United States is the heritage of the people of the United States. It is from this, primarily, that they must draw the means of their livelihood; it is upon this that they must build the edifice of their greatness and power. To permit our natural resources to fall into decay or to be ravished and destroyed by selfish interests means the waste and

dissipation of the people's birthright; the undermining of the foundation of their homes. If the Nation does not care for interests so great and exert itself to protect the people's rights, what power will? In taking the stand he has taken upon these questions, the President will, without fail, be supported by an overwhelming majority of the people of the United States.

Naturally, in the discussion of such a subject, theorists and defenders of the private right to commit public wrongs, will have recourse to formulas. As might be expected, the specter of "paternalism" is invoked, and the *laissez faire* theory which in Europe, a century and more ago, so valiantly served private ends as against the public well-being, is again exhumed and set to its greswome task of defending the unjust gains and privileges of the few at the expense of the rights and well-being of the many.

Is the work of reclamation, of forestry, of developing inland waterways and protecting natural resources in the United States "paternalistic?"

We answer, emphatically, *It is not.* And why not?

Consultation of the dictionary will enlighten. "Paternal" comes from the Latin, "pater," father. The idea of paternal government descends from the patriarchal age, when the tribal father, who constituted at the same time the priest, king, and medicine-man, controlled public affairs. Paternalism, however, assumed its most hateful form under the despotism. Louis XIV was the type of the paternal ruler. Czar Nicholas, the "Little Father" of his people, is a paternal ruler. Paternalism means one-man power; it means government irrespective of, or in defiance to constitutions; it means absolutism, and, historically, oppression.

What has all this to do with the policies here under consideration? Is the American government a despotism? Have we no constitution which rulers are bound to respect? Have we a chief magistrate who may do as

he pleases, serving the people if he choose, or crushing them if he will?

Certainly, the American people do not so understand. Theirs is a constitutional government. Their officers are not public masters, but public servants. They are chosen for a limited time to do the will of the people in accordance with the Constitution. Our Nation is a republic, it manages its own affairs. It even changes its Constitution at will when this document unduly limits the opportunities of the people. A paternalism is a government from the top down; a republic is a government from the bottom up. If a phrase or catchword is sought, we may say that government by the people is fraternalism. And between these two the difference is as great as that between autocracy and democracy.

The people of the American republic have, unquestionably, a right to mind their own business; to attend to their own affairs; to make the most, as a people, of their public domain, their heritage and their opportunities. To the extent that their constitution permits them to work along the lines above indicated, and that such work appeals to a majority of them as wise and helpful, who shall deny their right thus to do?

The American people are facing conditions which concern them far more than theories. The day of the phrasemonger has about passed. The day of rational, practical, healthful solutions of public problems is here.

The Denver Convention

The approaching Public Lands Convention to be held in Denver, June 18, 19, and 20, was announced in our last issue. On May 29 its program committee issued a formidable looking address, outlining the object of the meeting. This address quoted the constitutional power of the Federal Government over public lands (Art. IV, Sec. 3), stated that "the object of all parties to the contract" whereby our public lands were turned over to

the General Government was to "convert the lands into money, pay the debts, and erect new States," and that, therefore, this holding of lands by the National Government "must necessarily be of a temporary character;" it quoted the Supreme Court of the United States (Pollard vs. Hagan, 3 Howard, 395), "The United States never held any municipal sovereignty, jurisdiction, or right of soil in and to the territory of which any of the new States were formed, except for temporary purposes. * * * The United States have no constitutional capacity to exercise municipal jurisdiction, sovereignty or eminent domain within the limits of a State or elsewhere, except in the cases in which it is expressly granted;" it stated that "recently there has apparently been a decided change in the policy of the Government in regard to these lands. The new policy seems to involve the perpetual ownership and control of these lands by the United States under conditions that approach dangerously near the assumption of municipal sovereignty;" that "this change in policy started with a little eight-line amendment to an appropriation bill made near the close of a session, March 3, 1891;" that out of this have grown forest reserves approximating 140,000,000 acres in area; that "under the rules and regulations put in force by the departments, the Government has now actually assumed control of this vast area of land" under "what is practically municipal jurisdiction;" that "Congress has tentatively accepted this new policy by enacting a number of laws which apparently acquiesce in what has been done," but that "a proposition to extend the authority of the Secretary of Agriculture over the balance of the public lands failed to pass the last session of Congress;" and that the "proposed enactment * * * was debated at length in the Senate." It continues that "in July of last year, by order of the President, practically all of the public lands known to contain merchantable coal were with-

drawn from entry," that Congress might "enact a law providing for the leasing of the coal lands rather than continuing their sale;" that "Congress failed to enact a law * * * but the major portion of the 64,000,000 acres of coal land originally withdrawn is still in a state of reservation from entry;" that the Department of the Interior has "refused rights of way for irrigation canals and reservoirs upon or over public lands;" and that these acts are "retarding the development of areas which the people are anxious to utilize" and hindering the States from securing population to occupy public lands and "bring them under taxation."

All these questions, the committee announces, were to be discussed at the convention with a view to determining the propriety and policy of the acts mentioned.

Press discussion indicated that the convention was liable to be packed by opponents of the administration policy. Forester Pinchot wrote a friend: "Now I do not believe that the convention ought to be packed in either direction. There ought to be a representation there that will be fair to both sides of the controversy, and that will represent exactly the public sentiment of the States and towns from which delegates come."

This office is credibly informed that the delegates from Colorado and Wyoming constituted five-sixths of the entire attendance, that the delegation from Colorado was three times as numerous as that from Wyoming, and that the convention was strictly a Colorado affair, managed by certain Colorado statesmen. It was understood to represent, primarily, the grazing interests.

The announced desire of the administration to be represented in the convention was at first resented. Later, however, representatives of the Government were invited to attend. The *Washington Evening Star* of June 21 stated that the work of Secretary Garfield and Forester Pinchot,

in the face of heavy odds, was the feature of the convention.

At the closing session a bombshell was thrown into the convention in form of a letter from President Roosevelt which, in the following words, punctured the sophistry of the address and revealed its real animus:

"The most important of these misstatements is that there has been a change in the public land policy of the Government, which change will result in depriving the Western States of the right to settle the public lands with citizens. This allegation directly reverses the actual facts. The Government's course is to carry out the traditional home making policy of the United States as to its public lands. And the men most interested in opposing the action of the administration are endeavoring to upset the traditional course of the Government and are doing all in their power to turn the public lands over to be exploited by rich men and powerful combinations whose interests are hostile to those of the home makers."

The *Star* characterizes the convention as a "fizzle" and the resolutions passed as "very tame." The *Washington Post* (June 21) summarizes these as follows:

"Continuance of existing laws and customs as to grazing live stock on public domain, outside of forest reserves, urged. Experience has demonstrated the wisdom of treating the lands of the Nation as a public trust to be disposed of to actual settlers. Forest reserves to be created only where they do not infringe upon this policy. In all cases the rights of the State and the people to the unhampered use of all waters within forest reservations should be not only permitted but encouraged, and no charge should be imposed therefor."

The last probably grew out of the widely circulated rumor, mentioned elsewhere in this issue and refuted by Forester Pinchot, that the Forest Service planned to charge for the use of water from the reserves.

The outcome of the convention is believed to be decidedly advantageous to the Forest Service and to the several public policies criticized. It showed how small and local was the opposition, and made too evident the spirit behind this opposition. At the same time, the convention, though adjourning *sine die*, agreed to keep up a permanent organization of forces with the view of bringing Congress and the administration to carry out the points demanded in the resolutions adopted. Friends of these wise policies must, therefore, be alert and active, and maintain a continuous campaign of education, that the public mind may be clear as to the real issues involved and the merits of the same.

Utilizing Our Water Highways

A glance at the map of the United States reveals an intricate network of rivers. The most notable of these systems of rivers is the Mississippi, with its great branches, the Ohio and the Missouri. Attention is being called to the fact that our river highways are being put to small use. The President of the United States has recently appointed an Inland Waterways Commission to investigate the question of these highways. This commission has made an expedition down the Mississippi. The thing that impressed them most was the small amount of shipping on this great river, "the Father of Waters," which has been characterized as "practically useless as a common carrier." One reason given is that "the railroads have 'skinned' the river route by paralleling it with lines and 'hogging' the waterfront at all important landings and terminals." Again, it is pointed out that the arteries from which the heavy traffic for the river must come are not yet open; that the Mississippi should be connected with the Great Lakes, the Ohio improved, and the Missouri and upper Mississippi properly opened up, after which the commercial possibilities of the river will be greatly increased.

A point, however, of especial interest to forestry students and workers is the statement that the water conditions above Memphis are highly uncertain. In this issue is found a statement by Prof. L. C. Glenn, of Vanderbilt University, formerly employed by the North Carolina Geological Survey to travel over the South and study its waterways. On April 25, 1906, Professor Glenn, with others, made a statement before the House Committee on Agriculture regarding the importance of establishing the Southern Appalachian National Forests. His two statements are in harmony. They show that he found most of the rivers, great and small, filling with silt and gravel, the dams being destroyed, gravel bars forming to the detriment of commerce, and the great Ohio seriously affected. The Government is spending millions in dredging these channels, but its work is largely neutralized. Silt and gravel are descending from the mountain sides faster than they can be dredged from the rivers.

Note, on the other hand, the condition of railway transportation. Leading railway men, notably Mr. James J. Hill, are calling public attention to the utter inadequacy of our present railway facilities to handle the freight traffic of the country, and of the improbability that the railway systems of the United States will soon be able adequately to do the business. In view of these facts it is imperative that our river highways be availed of as fully as possible. When the vastly greater cheapness of water transportation than rail transportation is taken into account, the reasons for this course become still stronger.

But, in connection with these facts, let us consider the force of such other facts as those stated by Professor Glenn. At the very time when we should be opening up our river highways, we are obstructing them; at the very time when we should be providing additional transportation facilities, we are ruining what we have.

The frightful economic waste whereby, in time of war, the rail highways of a country or section are destroyed, is a subject of frequent and forceful comment. But what shall we say of a policy whereby, in time not of war but of profound peace, in an age not of darkness but of light, in an era not of barbarism but of civilization, we are permitting our water highways to be impaired, if not destroyed, and that by wholesale?

The cause of this impairment and destruction is well known to students of forestry. As often stated in these columns, the cutting of forests from mountain slopes occasions fearful erosion, followed by the filling of streams with sand, silt, gravel, boulders, and rubbish. For such a calamity there is but one remedy: the preservation of the forests on the slopes. To effect this end there is but one practicable course known, namely, to convert the forests on hill and mountain slopes into State or National Forests. Century-long experience has proved the utter failure of private ownership and administration to save these forests and to prevent the calamities following their destruction. By all means let the Inland Waterways Commission pursue its investigations and let it recommend such measures as will result in the highest efficiency of our waterways as common carriers; but rest assured that among these recommendations, one must find conspicuous place: the establishment of State or National Forests upon hill and mountain slopes on which important streams find their sources.

Place of the Private Association A correspondent writes: "It is my opinion that this rich country should not call upon individuals to support such an important movement as the protection of our forests. Our Government itself should look after this matter and should provide ample means for sustaining a forestry association and forestry developments. If our Government is not doing this, the

matter should be placed before the proper authorities without delay."

This letter, written with the best of motives, misconceives the place of government in a republic. To but a small extent, government originates things. It follows instead of leading. It is the people's servant, not their master. The better the government, the more completely will it do what it is told, reflecting the sentiments and aspirations and carrying out the orders of the sovereign people.

A new public question first appeals to the minds of individuals—perhaps to a single individual. This individual becomes the center from which radiates the new thought, and the demand that appropriate action be taken by public authority, local, municipal, State, or National. This individual agitates, educates, and organizes. He forms some private, voluntary association. This association, strengthened by the accession of new members and funds, pushes, more energetically and effectively, the work initiated by the individual. Other agencies, press, pulpit, platform, and what not, take up the agitation. Gradually public sentiment is formed; legislation is demanded; pressure is brought to bear upon legislators and, after repeated failure, legislation, at first limited and imperfect but improving with subsequent enactments, finds its place up on the statute book.

Even here the work of the private association is not ended. To write laws is one thing; to secure their enforcement is another. Administrators can not be expected to go much beyond public sentiment. The laws the people want enforced are much more likely to secure enforcement than those regarding which the people are indifferent. The private association must aid in maintaining sentiment that will demand the enforcement of good legislation.

It is along lines like this that the American Forestry Association has developed and is now working. It stands for agitation, education, and

organization looking to the enactment of new legislation—notably, at present, the Appalachian-White Mountain bill—and the enforcement of existing legislation wherever public authorities may in this regard be found lax.

From this viewpoint an important place surely exists, wholly outside the Government, for such an organization as the American Forestry Association and other organizations which might easily be named.

A Working Membership

Occasion is again taken to call attention to the value, to an Association such as this, of a large, active, working membership. The membership of the American Forestry Association now exceeds six thousand. What is not possible to an army such as this, organized, and thoroughly in earnest?

The Association greatly appreciates the dues paid by its members. Without these it would be helpless. A member, however, can aid in other ways than simply by paying dues. He can be, in his place, a living center of interest, activity, and enthusiasm for the forestry movement. If inclined to study, he can make himself a local authority on the forestry question. If possessed of the spirit of the propagandist he can, in season and out of season, call attention to the forestry movement and to the need of promoting and sustaining it in all wise and practicable ways. He can distribute forestry literature. He can enlist members for the Association. He can send news items or articles to this publication. He can put forestry matter into his local papers. He can encourage the formation of a local forestry circle to study the forestry question and promote the movement. He can develop the sentiment which will make possible necessary forestry legislation in his State. He can write his congressmen regarding the Appalachian-White Mountain question, and induce others to do so. In short, as was said of the early Methodists, he and his type can be "all at it, and al-

ways at it." A National office can do something, but alone it can do little. The membership should hold up its hands and use their utmost endeavors, each in his place, to forward the cause.

A Series by Our readers will remember the article in our May issue, entitled "Work in a National Forest," from the pen of Mr. Chas. Howard Shinn, superintendent of the northern division of the Sierra National Forest. We are pleased to announce that Mr. Shinn has consented to write a series of articles for **FORESTRY AND IRRIGATION** developing this general subject. His second article appears in this issue.

Our National Forests include an area equal to all that section of the United States bounded on the north by Canada, on the east by the Atlantic, on the south by the line separating Virginia and North Carolina and on the west by the line separating Pennsylvania and Ohio and extending southward to the line separating Virginia and Kentucky.

In this area are found the States of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, and about half of West Virginia.

Such an area has well been described as an "empire." It is great, not simply in size but in significance and possibilities.

From the standpoint of public policy and the general welfare it is of first importance that the American people should become familiar with the National Forests: that they should be able not simply to recite the figures representing their area (144,313,-

485 acres), and the names of the States and Territories in which they are found (Washington, Oregon, California, Idaho, Nevada, Montana, Wyoming, Utah, Colorado, Arizona, New Mexico, South Dakota, Nebraska, Kansas, Oklahoma, and Minnesota—not mentioning Alaska and Porto Rico); but that they should know what the National Forest stands for, what it is doing, what it is hoping to do, how it looks at close range both to the citizen and to the Government employee, whether and to what extent it is fulfilling its possibilities, whether it is increasing in popularity, and what are the problems confronting it.

Supervisor Shinn, from his long connection with the Forest Service, and his practical experience in the National Forests themselves, is admirably equipped to give to the readers of **FORESTRY AND IRRIGATION** an inside view of the great public utility represented by the National Forests. Furthermore, his earlier experience as a practical newspaper man enables him to tell his story in readable fashion.

FORESTRY AND IRRIGATION congratulates its readers upon this series of articles. It believes that these alone will be well worth the price of an annual membership in the Association. To those to whom the National Forest is a *terra incognita*, and their name is legion, such a series should prove a liberal education. It is hoped that the members of The American Forestry Association will call the attention of their friends to this presentation of the practical workings of the National Forest system, and will take this opportunity to make friends for the National Forest policy and secure members for the Association, an important part of the work of which is to promote this policy.

NEWS AND NOTES

Appreciation from Collier's *Collier's Weekly* contains an appreciative notice of FORESTRY AND IRRIGATION, with summary of some articles published therein. *Christian Work* follows in similar vein. It is reported that *Collier's* is to publish one or more articles soon on the forestry question. This publication appreciates the interest and courtesy of its contemporaries.

Annual Outing of the Sierra Club The seventh annual outing of the Sierra Club occurs during the months of June, July, and August. Its announcement, signed by William E. Colby, Chairman of its Outing Committee, is of interest to members.

The National Irrigation Congress The Fifteenth Annual Session of the National Irrigation Congress, to be held at Sacramento, California, September 2 to 7 next, should be remembered. Mr. W. A. Beard, Chairman of the Executive Committee, is advertising the meeting widely and using commendable efforts to make it to the fullest extent a success. The subject of forestry, including the Appalachian question, is likely to receive considerable attention.

Carlsbad Irrigation Celebration At Carlsbad, New Mexico, extensive preparations are in progress for the irrigation celebration to occur on July 3, 4, and 5. A fund has been raised. The celebration has been advertised to include addresses, receptions, horse-races, hose-races, ball games, a cow-boy tournament, good music, a grand barbecue, illuminations, and fireworks.

Messrs. James R. Garfield, Secretary of the Interior; F. H. Newell, Director of the Reclamation Service; A. P. Davis, Chief Engineer; B. M. Hall, Supervising Engineer; W. H. Sanders, Consulting Engineer, and W.

H. Reed, Constructing Engineer, all of the Reclamation Service, are expected to be present, together with many others prominent in the affairs of the Territory.

The presence of the American Society of Civil Engineers is also expected. Altogether, the event is expected to be one of much importance to the Southwest.

Women's Clubs at Jamestown Speaking of what women can do for forests, or any other cause, by the way, which they espouse, not the following from the *Washington Times*, of June 7th, entitled "A Word to Uncle Joe." Commenting upon the power of women in politics, the *Times* says:

"At any rate, the Federation of Women's Clubs, in session at the Jamestown Exposition, is holding Uncle Joe accountable for House indifference to the free art bill, the protection of American forests, and the national child-labor law. It was this non-voting element of our body politic that passed the pure food law. If they once get it into their pretty heads that your Uncle Joe is blocking the way to this other legislation, the only advice his friends can give is that of the Russian proverb: "Hope in the Lord, but exert yourself."

Mr. Mills's Lectures Mention was made in our last issue of the lectures given by Mr. Enos A. Mills, since January 1st, on forestry. A list at hand shows that he has spoken in the following States, the number of times indicated: Kansas, 2; Oklahoma, 1; Texas, 3; Louisiana, 2; Arkansas, 3; Missouri, 6; Michigan, 3; Indiana, 4; Iowa, 2; Illinois, 21; Wisconsin, 3; Nebraska, 3; Montana, 6. This is certainly a notable record. Friends of forestry may congratulate themselves that Mr. Mills is to continue in this work.

The Helena, Montana, *Independent* of May 12, gave three-quarters of a column to a report of Mr. Mills's lectures there. It described the lecture as "an odd but effective mixture of sentiment and sense; an illumination of both the practicality and the poetry of forestry." It said: "The lecture was a marked success, and as the final offering of the Civic Club's most successful season, it was well worthy of the big audience and pronounced applause which greeted the lecturer."

Helena Meeting

Mrs. T. J. Mott, of Helena, Arkansas, sends report of a very interesting meeting held at Helena on May 23, by the Pacaha Club. The following program was given:

Pacaha Club, program for May 23, 1907. Subject: Forestry. Our National Forests, Mrs. T. J. Mott; Uncle Sam's Play Grounds, Mrs. W. E. Bevins; The Economic Value of Birds, Mrs. M. L. Stephenson; Some Enemies of the Forest, Mrs. C. Quarles; The Proposed Appalachian Reserve, Mrs. A. M. Tanner. Mrs. T. J. Mott, leader.

Mrs. Mott's paper was one of such interest and sprightliness that we hope to be able to use it in an early number.

The interest of the women in the forestry movement is one of the most hopeful signs of the times. What the women undertake is likely to lead, sooner or later, to substantial results. Witness, for example, Carrie Nation's hatchet, which began operations in Kansas about five or six years ago; and, as a sequel, the actual outlawry today of the liquor business in that State; city sewers running with liquors, liquor dealers' property confiscated, and the dealers themselves fleeing the State. A little of the same kind of resolution and energy on the part of the women applied to forestry will, within a reasonable period, revolutionize the public opinion of America and render impossible the continuance of the present era of forest despoliation.

It so happens that, in this case, the chopping instrument is in the hands of those whose habits we would correct; fortunately, there is no reason to believe that, to save the forests, it will be necessary to resort to the methods which made Mrs. Nation famous.

Dr. Fernow Goes to Canada

Dr. Bernhard E. Fernow, formerly chief of the U. S. Bureau of Forestry, and recently professor of forestry in the Pennsylvania State College of Agriculture, is undertaking a new enterprise. He has become Dean of the new school of forestry, started by the Dominion of Canada, and located at Toronto. Dr. Fernow says it is the intention to make it the best school of forestry in North America.

Forestry in Harvard

The Harvard Bulletin for June 12th, devotes a half column to "The Division of Forestry." It states that some forty men now pursue the subject in the university and that seven were to finish their course in June. Three graduated last year. The work includes not only class-room instruction but actual practical experience in lumber camps.

Y. M. C. A. Forest School

During the past few years an evening school of practical forestry has been in operation in Portland, Oregon, under the auspices of the Young Men's Christian Association of that city, and directed by Mr. Edmund P. Sheldon, Secretary of the Oregon and Washington Lumber Manufacturers' Association. During the past winter lectures have been given by the director and others. These lectures have been entirely from the practical point of view and have been based upon the results of the personal experiences of the teachers.

Mr. Sheldon writes that the school is well past the experimental stage, and that its success has been demonstrated. The attendance and interest have been good, and the school is now a permanent institution.

An Exhibition A valuable and notable Worth function was held in Repeating Newark, this spring.

A forestry exhibition was given in the Free Public Library. This lasted for several weeks and was visited by several thousand people. The interest was so great that the exhibition was continued for a week longer than originally planned. The exhibition comprised pictures of trees, methods of cultivating lumber, insect enemies, streets and parks, and the great forests; specimens of injurious insects and their work; flowers in wax, branches of fifty kinds of evergreens, and nuts of many kinds; material to show paper manufacture from the log to the finished sheet; samples of boards and veneer, and many useful products of the trees, such as turpentine, varnish, cork and india rubber.

It is much to be wished that other cities would follow the example of Newark. Next fall, when school pupils and their elders alike come back from their summer outings filled with pleasant recollections of out-door nature, there would be an enthusiastic response if the friends of forestry would propose such an exhibition as this in every city. Doubtless the Newark people will be ready to give lessons from their experience, and anything that the American Forestry Association can do to aid such an enterprise will be gladly done.

Forestry and The San Francisco Call Irrigation in of June 8th, gave a **California** column report of the

convention of the Counties Committee of the California Promotion Committee at Petaluma, June 7th. The subject, "Forestry and Irrigation in California," was discussed at length. There were twelve stated addresses, in addition to the general speech-making. A banquet, given by the ladies, followed in the evening.

Dr. George C. Pardee, former Governor of California, made a strong address, saying in part: "The histories of other countries, as well as those of

parts of our own Nation and State, prove to us that the forests are necessary adjuncts of any and all schemes of continuous and successful irrigation."

"Fibre and Fibre and Fabric for Fabric" for June 22 publishes a the Forests column editorial entitled

"Save the Forests." It states that every reader of its pages should be interested in the work of properly conserving our forests, not only because of their importance to industries but also because of the supreme unwisdom of the onslaught which has previously been made upon growing trees.

Reforestation To reforest the pine by an Iron barrens of upper Michigan **Company** the Cleveland Cliffs

Iron Company has established two nurseries at which pine trees are being successfully raised from seeds. These pines are ready for transplanting two years after sprouting. Ninety thousand are now ready and are being set out on cutover land, near Coalwood, Alger County.

Mr. Mather, of this Company, is a Sustaining Member of The American Forestry Association.

Factories Must Not Poison Forests

The United States Supreme Court has decided that the State of Georgia has a right to protect its forests, and that the Tennessee Copper Company and the Bucktown Sulphur & Iron Company can be enjoined from so conducting their smelter works on the Tennessee side of the line as to destroy the forests and vegetation in Georgia. A wise decision!

Railroad Section Hands to Fight Fire

Massachusetts has adopted a law which will render the railroad employees available as fire fighters. This law not only requires spark arrestors on locomotives, and keeping the right of way clear of dead leaves and brush, but it authorizes the rail-

roads to clear unoccupied lands adjoining their lines. Furthermore, any train crew which discovers a fire burning uncontrolled is directed to give a fire alarm, consisting of one long and three short whistle blasts, repeated several times, and to inform the next section gang which the train passes, and the next telegraph station, of the fire. All section men and other employees whose services are not immediately required for the safety of the tracks and traffic are then bound to go at once and fight the fire. Railroad corporations are directed to inform their employees as to their duties in this connection and to furnish them with proper facilities.

**President
Finley for
Reserves**

In his address on May 23d, before the North Carolina State Bankers' Association, at Winston-Salem, President Finley, of the Southern Railway, said: "Although it is not strictly connected with the subject which I have been discussing, I wish to direct your attention for a moment to a matter in which we are all vitally interested. That is, the importance of the adoption of a system of forestry management that will result in the preservation of the great source of wealth contained in the forests of North Carolina. In many other parts of the country the forests were practically destroyed before the importance of the adoption of an intelligent system of forest management was generally understood. It is fortunate for North Carolina that its forests have been preserved to the present time, when other parts of the country are looking to this section for an increasing proportion of their lumber supply and of all articles manufactured from wood. As the forests now stand, they can be made a source of great wealth for all the future if they are properly managed, and can be made the basis for the many manufacturing industries in which wood is used as a raw material. If the forests of this region are to be preserved, it is essential that a

uniform system of management be put into operation, and I am in complete sympathy with the proposition to create the Appalachian Forest Reserve, because I believe that it is only by this means that the adoption of a uniform system of scientific forest management and preservation can be secured."

Cotton Manufacturers' Resolutions—The resolutions recently passed by the Cotton Manufacturers' Association, at Philadelphia, have received wide attention. The Rochester, New York, *Chronicle* states that while the President has lost some measure of his popularity in the far West because of his forest preservation policy, he has gained the ardent support of The American Cotton Manufacturers, and that this implies the approval of many other manufacturers also. The *Chronicle* summarizes the resolutions and adds: "Time will show the wisdom and foresight of the President."

Still More Associations Urging the Establishment of National Forests—The National Association of Manufacturers, in recent resolutions, declares that the timber and stone act should be repealed; that all public timber lands should be included in permanent forest reserves; that in every State sufficient National Forest reserves should be established to supply the timber needs of that State; and that legislation should immediately be enacted to create the White Mountain and Appalachian reserves. It also recommends a census of standing timber to be taken with the next general census in 1910.

The Cleveland Chamber of Commerce, recognizing that the timber famine of the future has come too near to the present to be ignored, has taken a stand for the National Forest policy, and for a stumpage census in 1910.

The National Lumber Manufacturers' Association also, at its meeting at the Jamestown Exposition, endorses

ed both these policies. The lumbermen in this association cut about 40 per cent of the lumber annually manufactured in the United States. The popular idea is that lumbermen are responsible for the waste of the forests, but these gentlemen recognize that collectively they can, with advantage, secure that which as individuals would be impossible for them to practise.

Pittsburg In-terest in Forests On June 13th, the Pittsburg, Pennsylvania, Chamber of Commerce,

held an important meeting devoted to the consideration of the Appalachian-White Mountain Reserve question. The meeting grew out of the desire of some that the study, now being made by the Forest Service under an appropriation by the last Congress, of the watersheds of the Appalachian mountain system, might be extended northward to include an examination of the tributaries of the Ohio River, in western Pennsylvania. There were present at the meeting some fifty representative, substantial business men. Mr. William L. Hall of the Forest Service, now engaged in the Appalachian study above referred to, was present by invitation and addressed the Chamber. Very deep interest was manifested in the subject. Mr. Hall's presentation was followed by a series of questions going directly to the heart of the entire matter. The manner in which these were answered evidently removed whatever doubt may have existed in the minds of any as to the desirability of the proposed reserves, or of extending them into the western Pennsylvania region. Stress was laid upon the connection between forested watersheds and stream flow, and evidence was presented that the removal of such forests results in a hurtful and sometimes disastrous alternation of floods and droughts. This principle, well known to students of forestry, appealed with peculiar force to this audience of practical business men. As a result, the following resolutions were passed unanimously:

Pittsburg Resolutions

Whereas, The Department of Agriculture, under an appropriation from Congress, is now making a study of the important watersheds of the Appalachian Mountain System with a view to recommending to Congress the establishment of Forest Reserves sufficient in area to protect the important streams of this region; and

Whereas, This subject is of vital importance to the City of Pittsburg and this community, both with a view to preventing the increasingly destructive floods in the Monongahela and Allegheny Rivers, and supplying water for navigation purposes in dry seasons; therefore be it

Resolved, That the Chamber of Commerce of Pittsburg fully approves of the establishment of Forest Reserves on important watersheds of the Appalachian mountains; that it respectfully requests the Secretary of Agriculture to extend northward to include the Monongahela watershed the surveys now being made by the Government; furthermore, be it

Resolved, That a copy of these resolutions be presented to the Secretary of Agriculture; and also to the Representatives in Congress from Pennsylvania, West Virginia, and Ohio, and that the latter be respectfully urged to support the movement looking to the establishment of National Forest Reserves about the headwaters of the important tributaries of the Ohio River.

Resolved, By the Chamber of Commerce of Pittsburg: That the Pennsylvania State Forest Reservation Commission be respectfully requested to co-operate with the Federal Government in the pending examination of the water-sheds of important tributaries of the Ohio River in Western Pennsylvania, and especially that it make an examination of the watershed of the Allegheny River.

The South's Development and Danger

Commenting on the Jamestown Exposition, *The Wall Street Journal* says: "The thing which will surprise most people is the great variety of products which the establishments of these agricultural States are now putting upon the market. Many of these products a dozen years ago were made in the Northern, Eastern, or Western States and shipped into Southern markets. Now this process is reversed, not only in textile industries but also in woodworking manufactures. The Southern States are not only supplying their own needs but are furnishing many of the densely populated sections of the rest of the country with all that the capacity of their establishments permits."

The present progress of the South is wonderful. We must not, however, overlook the fact that the very life of all that section south of the Potomac and Ohio and east of the Mississippi is intimately bound up with the preservation of the Appalachian Mountain forests; that these forests are going; that the experience of Europe, including France and Switzerland, proves beyond all question that forest destruction bears calamity in its train, and that no adequate method of preserving mountain forests has yet been discovered other than that of State or National ownership and administration. Unless the Appalachian bill shall soon become a law, the prosperity and progress of the South are already doomed.

A Federal Drainage Service

In *The National Geographic Magazine* for May, Mr. H. M. Wilson of the Geological Survey makes a strong plea for the establishment of a Federal drainage service for reclaiming the swamp lands on a basis similar to that of the Reclamation Service for irrigating arid lands. After briefly sketching what has already been accomplished in several States, he shows with the aid of a map and diagram where the sixty millions of

acres of swamp are located, and estimates that if properly drained they would furnish homes for six millions of people and crops worth seven hundred and fifty million dollars.

Federal Protection Needed

Under this heading the monthly magazine *System* says:

"The Government's inefficiency and shortsightedness were illustrated by the recent floods in Pittsburg, following those in Cincinnati, Louisville, and other cities.

"The Federal neglect of rivers and forests is scarcely short of criminal. Estimates of the cost of the latest flood vary from \$25,000,000 to \$50,000,000. Insuring the public against floods would at the same time advance the transportation problem. The Government has not wisely administered its control over waterways. Perhaps no means of equalizing the flow of rivers would be more fruitful than the reforestation of denuded mountains. No doubt many streams that have ceased to be navigable at all might be made to float vessels again through the rejuvenation of the forests."

May Serve Both State and U. S.

President Roosevelt issued an executive order on June 13, setting aside the rule of 1873, forbidding Federal officers to hold office under any State or Territory. The President declares it is necessary for the proper enforcement of the fish and game laws, and the live-stock and forest-fire laws, to have State and Federal officers work together. To this end he orders that State and Territorial officers may serve as collaborators of the Federal Forest Service.

Census of Timber Products

As announced last month, the Census Bureau in co-operation with the Forest Service, has gathered statistics concerning the production of lumber and timber products. The production of lumber, lath and shingles

is being published for each State as fast as the States bring in their figures. Reports for several States have now been published, viz.: Louisiana, Texas, Florida, Virginia, Arkansas, Mississippi, West Virginia, North Carolina, South Carolina, Missouri, New Hampshire, Oregon, Washington, California, Pennsylvania, and Maine.

In regard to veneers, the total number of logs used and veneers produced from each kind of wood is reported, seventeen kinds of wood being mentioned. A report is also given on the consumption of pulp wood, covering the consumption of 250 mills, and giving the cords used, in mechanical, sulphite, and soda processes, of each of eight kinds of timber.

State Forestry The *Pathfinder* for May 4 gives the following answer to the question, "What State was first to protect its forests?" "New York. In 1885 it established a forest preserve. At present it has a forest, fish, and game commission upon which devolves the enforcement of the forest, fish, and game laws, the management of the forest preserves, and the acquisition of lands by the State. The States now having officers charged with forest interests are: California, Connecticut, Kansas, Indiana, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, North Dakota, Oregon, Pennsylvania, West Virginia, and Wisconsin."

Good Laws in Pennsylvania The Pennsylvania legislature has passed some important laws this year. One is to prevent fires. It makes every constable and employee of the State Forestry Department a fire warden, requiring him to detect and put out fires and authorizing him to employ help at twenty-five cents an hour. This is paid immediately by the county and two-thirds is afterward refunded by the State. Fines and imprisonment are provided for neglect of duty. These provisions are

similar to those governing the National Forests with respect to fires, and it is hoped that the law will be effective. It also offers rewards for the apprehension of persons who set fires.

Another law is one to encourage the planting and rearing of forests by reducing taxation. Ninety-five per cent of the taxes on woodland is rebated for the period of thirty-five years. It is said that there are upward of fifty-five thousand acres of neglected sprout land in Pennsylvania. It was taxed as high as other land and abandoned by the owners because profitless. When sold for taxes the people would not buy it. This provision enables the owners to reforest the land and hold it as woodland while the new trees are growing.

Shade Trees on the Highways The last Pennsylvania Legislature passed a law to provide for the planting and care of shade trees on all the highways of the commonwealth, in town or country. Why should not public agencies plant trees along country roads as well as along the streets of towns?

In New York Also In New York, also, Mr. Jonathan Y. Cuyler, civil engineer and landscape architect, is urging the State to take up the planting of trees along the highways. He calls attention to the fact that the nurseries of the Forestry Commission and the Board of Agriculture could be utilized in this effort.

Legislative Indifference in Minnesota Following the adjournment of the Minnesota Legislature the *Pioneer Press* mercilessly scored that body for its absolute and utter failure to enact any substantial forestry legislation. After enumerating the legislative sins of omission the paper said, "The 'skinners' who live and think only for the present, with no care for the future—not even for that of the boys and girls now growing up—dominate both branches of the legislature. The

slightest quibble or trumped-up objection suffices to convince the average legislator of the advisability of turning down any forestry measure, no matter how beneficent, even if it calls for no expenditure by the State and promises revenue instead."

The *Pioneer Press* looks to the Nation for relief. It predicts a rising tide of protest from the East against forest destruction, and such a reorganization of congressional committees as will make possible the enactment of the Appalachian-White Mountain bill. Following in the wake of such legislation it hopes that something may be done for Minnesota.

The Nation plays a vastly important part in the affairs of the American commonwealth, but the place and power of the State should not be underestimated or diminished.

Relief from Taxation

In Indiana also they are discussing the relief of young timber from taxation. Representative Poer points out that though forest lands bring little or no income, they are taxed on their value as determined by what they would produce if cleared and cultivated. So that while the State encourages forestry, it at the same time in effect forbids reproduction of forests by private owners. It is said that under the State Constitution the only chance of exemption of young forests from taxation would be by classifying this use as scientific. But unless the Constitution prescribes the principle of assessment, it would seem easy to reduce the taxation to a nominal figure.

Maine and Her Great Forests

Charles H. Bartlett on Monday, May 27, addressed the Bangor Board of Trade on the above subject. He deprecated the careless and wasteful methods of lumbering which have seriously diminished the lumber supply of this State and added to the risk of fire. He called attention to the ig-

norant clearing of the forest which has elsewhere caused erosion of the soil, filled river channels with silt, caused alternate droughts and floods, and ruined natural advantages which otherwise would have perpetuated prosperity and comfort. He quoted Mr. Overton W. Price, of the Forest Service: "It is the history of all great industries directed by private interests that the necessity for modification is not seen until the harm has been done and its results are felt. This fact has been emphasized in the lumber industry."

Mr. Bartlett stated that "from costly experience elsewhere we can at least take warning and seek to avert like consequences, * * * and it is for this purpose that the Forestry Department of the State was organized, * * * which is rendering such efficient aid to timberland owners in the protection of the forests against fire by the establishment of look-out stations and the appointment of fire wardens." He urged that the people be made to realize the necessity of protecting the forests from fire, overcutting and wasteful lumbering.

Speaking of the wild lands of Maine, he stated that if these were thrown into the hands of speculators, the latter, unless restrained, would at once strip them, thus increasing the danger of fire, reducing both the forests and the game, causing the streams to dry up, the water-powers to dwindle away, the wheels of industry to turn slowly, all kinds of business to diminish, and disastrous floods to ensue. Fires, he said, frequently resulted from the careless work of hunters and squatters. Hurricanes occasionally blow down large tracts of standing timber and sometimes a whole township of timber disappears in smoke in a few hours. Pulp mills have added to the value of timberlands, but have caused grave apprehension of the early exhaustion of the spruce supply.

To protect the forests of the State, The Maine Forestry Association was

formed last winter; the Governor attended and addressed the meeting, and the interest manifested was a hopeful sign.

The introduction of economical methods and processes, as of the substitution of the saw for the ax, and the introduction of band-saws in mills, was mentioned.

Quoting President Roosevelt before the American Forest Congress, "You must keep your ideals high and yet must seek to realize them in practical ways," Mr. Bartlett said: "In these days of the selfish scramble for wealth, higher ideals are pushed aside and forgotten; but in those same ideals consist the basis of true progress and the best welfare of the human race."

The Kansas-Colorado Law Suit

The famous law suit of Kansas vs. Colorado has been decided. This dispute between two States might have produced war in former generations, but our States instead of fighting appeal to the interstate arbitration tribunal at Washington—the Supreme Court. The Arkansas river rises in Colorado and traverses the treeless plains, furnishing water for irrigation in both States; but the Kansas irrigators claimed that the amount of water withdrawn before it reached the Kansas line was so great there was not enough left for them, and they invoked the legal principle that all the dwellers along a stream have an equal interest in the whole stream, and hence asked for an injunction against withdrawal of the water by Colorado irrigators.

The Supreme Court, however, upheld the right of every State to allow and govern the use of water for irrigation, and to set aside the old common-law rule above mentioned, so far as it would apply to irrigation. The court further held that the United States has no authority to regulate irrigation, but that this is a State matter strictly. It held that if Kansas were actually injured in sufficient de-

gree by the Colorado irrigation practise, then Kansas might bring suit for relief; but that as things are now the benefit from irrigation in Colorado is greater than the loss from low water in Kansas, and Kansas can not complain on general principles of irrigation being carried on, because it has made laws itself to encourage this practise.

Hundreds of witnesses were examined in the trial. Not only the authorities of the two States, but many private corporations were eager to be heard, and representatives from the United States were at hand to protect Federal interests. It is fortunate that the outcome of the trial favors the continuance of irrigation. If the settlers along the waters of an interstate river could not use its waters under the laws of their own State, for fear of trespassing on the rights of States further down, little irrigation could be done, for most of the rivers flow across two or more States.

Approval from Colorado

From Colorado emanated the call for the public land convention which, it is understood, is to oppose the Government's forest policy. From the same State, however, come strong resolutions in support of this policy by the Colorado State Forestry Association. Since this body represents those who realize the importance of the forests, their view is significant as indicating that the forest policy has not been accompanied by such perversion as is alleged by those who make this a pretext, but who really care little for the preservation of the forests.

The resolutions assert: (1) That persons enjoying the products of the reserves for grazing or power plants should pay a reasonable price; (2) that the policy of selling mature timber is commendable and the method of competitive bidding closes the door against fraud and waste; (3) that the Federal government by this work relieves the State of an enormous expense which the State could not well

afford; and (4) that there is no force in the claim that the reserves hinder the growth of the State.

Importance of Forestry In discussing editorially the Denver Convention, the *Kansas City Times* said:

"Now it happens that forestry is one of the most important, most far-reaching, subjects before the people of this country. It affects States without large areas of forests as well as those having large timber tracts. It is not only necessary to conserve the forests that yet remain, but it is absolutely essential to the permanent welfare of the country to plant forests."

No Ground for Indignation The *New York Sun* thinks there is little ground for the claim

made by some in the West that the forest administration has established "a system as obnoxious and oppressive as English landlordism in Ireland." The *Sun* says these poor victims of oppression have obtained their homesteads from the United States on easy terms. They are now indignant because they cannot use public property without paying for the privilege; and the logical extension of this proposition would give the people of Washington the right freely to pasture their cows on the White House lot, and to cut down trees on the Mall for firewood.

A Mighty Drama

The *Washington Post* remarks: "The fight for the forests, with private and corporate greed on one side and the Government on the other, becomes more acute every month. It is one of the mighty dramas of the age; but owing to its length and the complex character of the plot, few people appreciate the magnitude and picturesque nature of the struggle. If there is any policy which will make the name of Roosevelt illustrious hereafter, it is that of preserving the forests of the

country for the people, in the face of the most powerful and cunning opposition."

What Date is This? Speaking of wild talk, how is this from *Ranch and Range*, quoted in the *Saguache Crescent* (Colorado), April 25, 1907?

In discussing the situation which led up to the Denver Convention, and criticising the extension of forest reserves and the power of the Forester, the editorial declares, "This question of taxation without representation is the same principle that prompted our forefathers to resist by force. * * * When it comes to practically depriving her (the West) of her resources, and using the moneys derived from an unjust taxation of her people for the improvement of the East, the West demands recognition, and should she not obtain it one way, she may be forced to resort to the strong arm, and ultimately she will say to the East—Go your way and we will go ours."

Is this an echo from the Hartford Convention, or from 1860?

Indictments Might Dampen Enthusiasm The *New Orleans Times-Democrat* remarked that it was

to be hoped the expected indictments against highly placed timber thieves would not be found until after the public land convention in Denver, because such thieves would be certain to join in the protest against the forest administration and it would be interesting to see how far their assurance would lead them to proceed. Indictments against the convention's members or sponsors might dampen the enthusiasm of the gathering.

Good Work Appreciated

We hear sometimes of criticism from the mountain States, of Forester Pinchot and his policy. The Helena, Montana, *Independent*, of May 17th, sounds a different note. In a half column article, entitled "Pinchot For Us," it uses such language as follows:

"The head of the Forestry Bureau is Gifford Pinchot. We like him. We like Roosevelt better, because Roosevelt knows his man, because Roosevelt stands by Pinchot. * * *

"There was not a day during the consideration of the increase of his salary that Mr. Pinchot could not have contracted with wealthy corporations that need his service, at his own price. * * *

"The railroads are troubled about their stock of ties. * * * Now, the problem is how to get what are actually needed; and such men as Pinchot can answer the question—taking a few years to do it. He would grow trees. He knows how. He is growing them for the Government out in the arid country, creating forests to preserve the water supply for irrigation. By this means thousands of acres of worthless land is reclaimed. * * *

"Pinchot has provided homes for thousands of families * * * and he says he would rather do this than to raise railroad ties at twenty times the price.

"F. H. Newell, director of the United States Reclamation Service, gets \$5,000 a year, and could take probably ten times the salary from any one of a dozen engineering firms; but he has a liking for doing for the public. He likes it for 'the joy of doing the biggest things that are done anywhere on earth, in the biggest and quickest way.'"

Why Criticisms?

The *Chicago Post* of June 3d contains a column story entitled, "Land Graft Stopped. Cause of Criticism. New Policy of Administering Public Domain Arouses Resentment of Certain Interests in West." The story opens with this paragraph: "Official Washington has adopted a new view of the Government's duty toward the public domain. Under the old regime public land, with everything in it and on it, was looked upon as property on which any one might prey. A

squatter might settle on a section and eventually call it his own; a railroad might convert large areas to its own use without consulting the Government; capitalists might take possession of rich coal or oil fields, and as long as no one came to throw them out fill their pockets with money taken from Government property; cattle raisers turned their herds on the public grazing land without thinking of asking for permission or offering to pay anything for the privilege; timber dealers felt free to enter and cut lumber at will.

"The change brought about is simple but far-reaching. All the Government is demanding is that the public domain shall be handled the way a thrifty land owner would handle his acres."

The *Post* states that this change in policy resulted in protest. Naturally, the grafters and timber and coal thieves would object. Others, in addition, chafed under the restrictions which have been thrown about the public domain, the action of the Administration in creating new National Forests, and the policy of charging for forest reserve resources. This discontent on the part of some has led to the recent Denver meeting.

Public resources are unquestionably for the public. When, now, an insignificant fraction of the total population of the United States assume themselves to be the public, at least so far as public lands and National resources are concerned, we may readily understand how the attempt of the actual public to protect itself will be resented by the handful who imagine the part to constitute the whole. There is nothing, however, like free discussion to clear up points like this.

Trabuco Canyon National Forest Mr. C. S. Chapman, chief of the office of organization of the Forest Service, writes regarding the Trabuco Canyon National Forest:

"The forest is situated over the low rolling hills of the Santa Anna

Mountains which lie south of the Los Angeles valley in southern California. The valley in which the towns of Riverside and Carona are situated adjoin the eastern boundary, and on the western boundary the hills slope down to the Santa Anna valley. No towns or settlements of any size are situated within the forest. A paying tin mine is being worked on the west slope of the forest, and oil deposits are being developed in the Santa Anna hills, adjacent to the boundary, and it is probable that oil deposits will be found in the forest.

"The chief value of the forest is for the purpose of grazing. Excellent feed exists in the hills throughout the winter and early spring months during the winter rains. The feed dries up and the hills become barren during the summer months. There is very little agricultural land, but on the lower slope of the hills along the boundaries small areas of land in the stream beds are cultivated.

"The forest serves its most important purpose as a conservator of moisture, and agricultural interests in the adjoining valleys are to some extent dependent upon the flow of streams originating in the hills. These streams flow only during a limited portion of the year, and after the month of April very little water flows off in the bed of the streams. Considerable seepage continues under the ground along the stream channels, and this often is tapped by artesian wells. The value of the forest would be immeasurably greater if there were better cover over the hills. There is practically no merchantable timber in the forest. A few Coulter pine trees occur along the west of the main ridge of the hills extending north and south, and along the stream courses which head back among the hills a scattering stand of live oak, cottonwood, alder, sycamore, and California walnut occur. Over the rest of the hills the cover is a scanty growth of low chaparral of many species of shrubs native to southern California.

"One of the most attractive features is the Trabuco Canyon, a narrow canyon, better timbered than most of the canyons penetrating the forest. In this canyon there is a luxuriant stand of native California palm, and the canyon presents an attractive appearance and is frequently visited by tourists.

"Considerable improvements have been undertaken by the Forest Service; roads have been improved and good trails constructed up the canyons for the convenience of visitors and also to connect points of interest. Several cabins and pastures have been built for headquarters for Forest Rangers. A Forest Nursery is being established and planting will be undertaken with eucalyptus and other trees upon bare and chaparral grown areas in order to improve the cover and make the forest a better conservator of moisture.

"The forest is protected from fire by ranger patrol throughout the season of fire danger each year. In this way the chaparral cover which, in the absence of a growth of timber, is an important factor in obtaining moisture, is prevented from being denuded from portions of slopes of the hills by grass fires which might run into the forest from unprotected private lands adjoining it.

"Any further information which you desire will be cheerfully furnished by Supervisor J. R. Bell, Hemet, California."

Getting *The Galveston Tribune*
rid of remarks that France has
\$18,000,000 just spent eighteen million dollars for tree planting, and that this is just the total of the flood damage along the Ohio River during the last four years. Instead of spending eighteen million dollars to plant trees we prefer to lose it in floods caused by the lack of those trees.

Evergreen *The Experiment Station*
Planting in of the Iowa State Col-
Iowa lege at Ames is now is-
suing a bulletin (No. 90) that de-

scribes the best evergreens for Iowa farms.

A general resume of tree growing in the State, the reasons why more trees should be grown, methods of planting, cultivating, and pruning different species, and their adaptation to various localities, are the main subjects treated. It is a handsomely illustrated pamphlet containing much valuable information. The bulletin may be had by applying to Prof. Chas. F. Curtis, Director, Ames, Iowa.

Profit in Catalpas

The Kansas City *Journal* recently devoted a column to the discussion of the above subject. It recognized that the tree is one "of which excellent results can be expected wherever the right conditions prevail." It stated that "it may be counted upon to yield good returns on deep, fertile, porous soil, where the water table is not too far from the surface;" and mentioned Ohio, Indiana, Illinois, Iowa, eastern Nebraska, and Kansas as States and sections in which such soil may be found. It quotes a successful catalpa raiser whose only worry is because of his inability to supply the demand for his posts, even at fifteen cents each. There is certainly a great field for the catalpa.

Age of Concrete Coming

The Washington *Times* predicts the rapid approach of the age of concrete; it points to the passing of the forests and of the iron ore fields in Lake Superior, states that Europe has met the timber famine and high price of steel by building her cities of concrete, and points to the fact that the supply of concrete is inexhaustible.

Substitutes, fortunately, can be found for wood in some of its uses. But this fact no more argues that the disappearance of the forests would be of slight consequence than does the discovery of the illuminating properties of gas and electricity argue that the going out of the sun in heaven

would signify little to the world. We welcome the substitutes, but we urge the conservation, nevertheless, of our forests.

Demand for Stumpage Census

The National Association of Box Manufacturers, representing an industry for the supply of box material, already scarce, urges the Government to make a census of the standing timber. Ten years ago boxes were sold for 75 cents a wagon load and split up for kindling. Of late they are sold for 10 to 25 cents each and used over again. Other organizations also are urging this stumpage census. The Census Bureau received four petitions in one day.

Reprint of the First Census

The Census Bureau nowadays collects varied information of a useful nature in addition to numbering the inhabitants. The very first census, that of 1790, began this policy by gathering elementary information as to the military and industrial strength of the country.

The Census Bureau announces at this time that it can furnish, at the price of one dollar each, the names of heads of families and accompanying information shown on schedules of the census of 1790 for the States of New Hampshire, Vermont, and Maryland. The entire series of schedules so far as they still exist will be published when Congress grants authority and money. In the States named, the heads of families in 1790 were limited in number and the records are in a condition which makes transcription comparatively easy.

A Sidewalk Overrated

"In a suburb of Philadelphia," says *Forest Leaves*, "two fine tree specimens, each exceeding a century in age, were felled—to accommodate a side-walk along a public road. The walk could have been diverted around the trees, or its grade changed, but the supervisor wanted a straight, level walk."

The necessity of having side-walks straight is greatly overrated. A community accustomed to returning home sober, at night, runs little risk in having a side-walk bend occasionally around a grand old tree; while, Sam Walter Foss's "Calf-Path" to the contrary notwithstanding, the loss of time in going around such a tree is amply compensated by the presence of such a friend of man.

Provide for Your Grandchildren The man who wishes to make provision for his grandchildren can do it by planting a pine forest in Florida. Set out systematically in an old, abandoned field, a pine forest will grow and flourish. Carefully looked after and replaced when damaged, these trees will reach maturity in forty years. Two thousand dollars an acre is a moderate estimate of what the land will be worth with four hundred trees per acre upon it.—*Tampa Times*.

Portable Sawmill Work The *Times-Enterprise* of Albert Lea, Minn., takes pleasure in seeing the use of portable sawmills cutting lumber from trees on farm woodlots. In some parts of Minnesota a considerable amount of lumber is cut in this way.

Newfoundland Forest Resources The forest wealth of Newfoundland is extensive and varied. The mainstay is white pine of a superior quality. The country is easy of access to the lumberman, with a coast of six thousand miles broken by innumerable inlets adjacent to the forest belts. Negotiations are in progress for the launching of two more large pulp mills in the colony. An expanding market for spruce and pine is found in Argentina.

Game and Forest laws in Tennessee *The Nashville American* gives a summary of the requirements of the forest laws in Tennessee and advises those who are interested or affected to write for the pamphlet containing the

laws. *The American* attributes the existence of this legislation largely to the State Warden, Col. Joseph H. Acklen, who, serving without salary for four years, has given his time, labor and money to the cause. The Department of Game, Fish and Forestry, one of the most important of the State departments, enters upon its fifth year without ever having received a single dollar of appropriation from the State.

Tree Planting in Norway Norway is one of the lumber reservoirs of the world; yet the Norwegians appreciate the advantage of renewing their woods before they are exhausted. Tree planting has attracted much attention in recent years. United States Vice-Consul Alger reports there were nearly seven million trees planted in 1905, of which one million five hundred thousand were by school children and other young people. Forest planting is being introduced into the public schools.

Bamboo Grass for Paper Pulp The Japanese government, through the Agricultural College, has been experimenting unsuccessfully to find a satisfactory native pulp material. Lately, however, it has tried the young bamboo plant, or bamboo grass, with very pleasing results. Former material failed in the drying. This dries readily. It grows in great profusion and can be cultivated as a farm crop. If this turns out well it will be a valuable discovery. The United States Department of Agriculture is trying to introduce bamboo into our Southern States.

Japanese Method of Preserving Wood Prof. Taizan Shiza, the Japanese Director of Forestry, has patented an invention for the preservation of wood in railway ties, posts, and bridge timbers. Capitalists in Osaka have formed a company to establish an industry of this invention. Tar and creosote are understood to be the principal materials used.

FOREST PARKS ALONG THE ROADS AND RIVERS OF MAINE

THERE has recently been enacted in Maine a law entitled "An Act to preserve trees abutting public highways and other places." This act gives authority to all cities and towns of any size whatever to procure for park purposes strips of land not exceeding five rods in width, which are located beside highways and public waters. Payment must, of course, be made to the owners of land condemned for this purpose.

The act provides that this land shall be under the control of the municipal authorities. The owner, however, still retains many of his former rights. He may open private ways, clear and improve, if such action is consistent with the preservation of the trees, and use the land for building purposes. The act authorizes no one except the owner, the municipal officers, and their agents to enter upon the land.

The purpose of this legislation is obviously to protect and perpetuate the beauties of the forests along the Maine roads, lakes, and rivers. It is now within the power of the cities and towns to prevent the unsightly highways and the accumulation of debris which always covers the banks of the lakes and rivers after the timber has been cut.

This is one of the most important and comprehensive acts ever passed in any State for the preservation of natural scenery. It is undoubtedly valid. The general attitude of the courts has always been to uphold the constitutionality of laws passed for purposes of this kind. The advantages to the public in having these strips of forest

lands preserved is obvious. In Maine, especially, these advantages are not merely esthetic, for the forests along her roads, lakes, and rivers are the greatest attraction for tourists.

At first sight, the expenses which extensive purchases of this kind would entail seem sufficient to prevent the towns from taking advantage of the law. If, however, the purchases are conducted continuously even though they cover small tracts, the scenery along a large portion of the public ways and lakes will, eventually, be protected.

There are some disadvantages in leaving the matter to the initiative of the several towns and cities, since those which have the lands most suitable for this purpose are not likely to realize the necessity of preserving them until cutting has begun. There are greater objections, however, to giving the State control. It is undoubtedly necessary to allow, as the act provides, the owners of the land to select and clear building sites upon it. Unless discretion in selecting and purchasing is allowed to those who are primarily interested in preserving the strips along highways, *i. e.*, the towns and cities in which they are situated, it would be impossible to prevent fraud by owners who intended to open large tracts for building purposes. The benefit, moreover, while it results largely to the State, is mostly to the towns and cities.

If the act proves practicable other States should, and probably will, adopt similar legislation.



REPORT OF THE FORESTRY COMMITTEE*

BY

Mrs. P. S. Peterson, Chairman of the Forestry Committee of the
General Federation of Women's Clubs

"THE life of the State and of the Nation depends on the preservation of our forests." These words of the President form the keynote of the work of the Forestry Committee; a work which connects the interests of every part of our land with Washington, the center of forest activity, and the seat of legislative action.

Every State in the Union, whether heavily wooded or destitute of trees, should have intelligent laws providing for a due proportion of forest area.

This is a field of usefulness in which women may wisely exert themselves for the welfare of the Nation, and of their own States, by spreading information and shaping public sentiment. With this end in view, the Chairmen of Forestry in all the States were urged to give earnest thought to the methods by which existing forests, in their own localities, might be preserved and improved, in order to conserve their beauty and economic value. They were asked to emphasize the utilitarian side, in preference to the esthetic, and to lend their aid in acquiring and scientifically handling all forest reserves which protect the head-waters of important streams.

A vast amount of valuable data has been obtained from answers to a list of questions sent to each member of the committee. This information represents a great variety of interests, from the watchword of the "Lone Star State," "a more beautiful Texas," to the work wrought by the women of California in saving the noble sequoia

trees, and in the successful crowning of the efforts of the New Jersey women to preserve the Palisades.

Suggestions sent out contained the following requests:

"Aim to have every Club in your State give one day or more each year to the subject of Forestry, and assign it a place in the programs of State and District meetings.

"Have a definite presentation of this most vital subject, which affects not only the health of the people but the amount and distribution of rainfall, thus controlling the freshets and corresponding seasons of drought, equalizing the climatic conditions of the country, and providing for the constant and increasing demand for forest products.

"Ask the Clubs to study Forestry, and see that books and periodicals treating of the subject be placed in local and traveling libraries and reading rooms, and that they be brought to the attention of the Clubs."

The enthusiastic way in which the Committee of Forestry supported the efforts of your Chairman deserves especial notice. Nearly all have complied with requests for information and have co-operated in every way suggested. Two of them have become so imbued with the importance of the subject that they are taking a course in forestry in a technical school, in order to be the better equipped for their work along these lines.

In order to accomplish the greatest benefit we recommended that some one

*The above report of the work of the Forestry Committee of the General Federation of Women's Clubs for the year then ending was submitted by Mrs. P. S. Peterson, Chairman, at the annual meeting of the Committee, at Jamestown, in June.

qualified to treat the subject of forestry authoritatively should address the Clubs when such an arrangement could be made possible.

It would be hard for any one, who heard the lecture delivered by Enos A. Mills, of Colorado, at the Biennial, a year ago, to forget what was said about "Our friends the trees." Few people can tell the story of the forest or the forest-life so well, because of the years spent in the heart of the mountains and woods where he communed with Nature, and learned to know the literature of Burroughs, Muir, Thoreau, and other kindred spirits.

After speaking, Mr. Mills had scarcely left the platform before he was importuned to lecture in a dozen or more different States, and all who were so fortunate as to secure this privilege, felt that the investment of fifty dollars was wisely made.

Last winter the Forest Service at Washington engaged him as collaborator, and on account of their appreciation of the work being done by the Women's Clubs, proffered his services to your committee, free of all expense, from March 1st to the middle of May. By the aid of the State Chairmen, arrangements were made for placing Mr. Mills in the most important centers, as far as time permitted.

A very extensive tour was arranged whereby he was enabled to give more than sixty addresses in thirteen different States, at which men were largely in attendance. He also spoke before the joint sessions of legislatures

and to the students of many universities, normal and high schools.

It is too soon to estimate the result, but the day following one of his lectures, a lumberman decided to reforest 6,000 acres of land under instructions from the Forest Service. Another, who had ordered a tract cut down along a waterway through his farm, made a trip of twenty-five miles to countermand its execution.

The wide sphere of usefulness to which the Clubs have attained is largely due to the generous co-operation of the Forest Service.

We are also indebted to the American Forestry Association, which publishes in its magazine, FORESTRY AND IRRIGATION, reports of the work of the Women's Clubs, and such articles as are sent for that purpose. Your Chairman feels that further co-operation will be greatly to our advantage, and recommends that as individuals and as Clubs we become affiliated with this organization.

It is only through such a source that we can keep abreast of the times in this all-important subject.

One of the live issues to which women have contributed their influence is the effort to secure the Appalachian-White Mountain Reserves, which has not been accomplished. All energies will bend toward the attainment of this end during the next session of Congress.

Your Chairman feels deeply gratified by your manifested interest and welcomes all suggestions which will lead to better work and more definite results.

THE TREE PLANTER

He who plants a tree,
He plants love;

Tents of coolness spreading out
above

Wayfarers he may not live to see.

Gifts that grow are best;

Hands that bless are blest;
Plant, life does the rest.

Heaven and earth help him who
plants a tree,

And his work its own reward shall
be.

DEAD TIMBER IN THE NATIONAL FORESTS

BY

E. R. Hodson, Forest Assistant, Forest Service

ONE of the most important problems in the management of the National Forests is that of the utilization of material that is not increasing in value.

So long as other classes of material are available for the same purposes, the most farsighted economy

for it is an essential principle in forestry that some present gain must be sacrificed in the interest of the permanent good of the forests. So far then, as may be, while supplying the communities dependent upon the National Forests with necessary material, the forests should be cleared of those



Red fir and timber pine burned forty years ago
Pike's Peak National Forest, Colorado

prohibits the use of the stock already growing in the forests; that is, stock not at its full value, but increasing rapidly in value each year. Even though these other classes of material may be less satisfactory than the growing stock they should, nevertheless, wherever practicable, be used;

classes of material which are either a detriment to them or are decreasing in value.

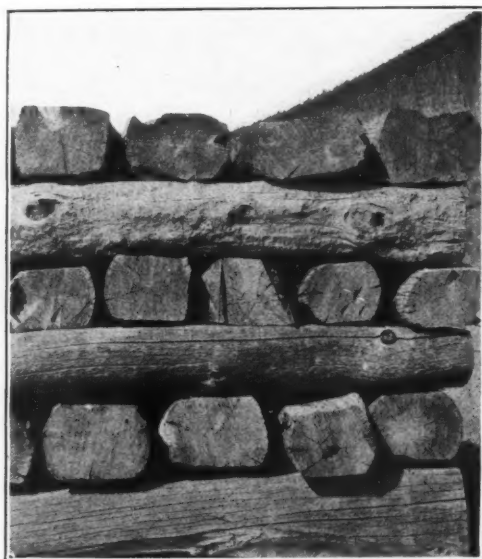
The two principal classes which it is highly desirable to remove are mature timber and dead timber. Mature timber, while not increasing in value except as the general level of stump-

age price rises, is in many cases of very high value as watershed protection. Dead timber on the other hand is, with few exceptions, decreasing in value and in addition is often a menace to the growing timber.

The study made last season by the Forest Service of dead timber situated in the National Forests developed two very striking facts, namely, first, the actual value of sound, dead timber and, second, the wholesale use of

in tracts ranging from a few acres up to several thousand acres, the latter containing many millions of feet. It is found in all quantities and in all stages of decay. Its varying condition, combined with popular ignorance of its real utility, explains the strong prejudice against it in certain localities.

In but a few places is bug-killed timber found in large quantities. One of the most notable of these places is



Railroad ties made from timber burned forty years ago
Pike's Peak National Forest, Colorado

dead timber in some localities, sharply offset by a strong prejudice against it in other localities.

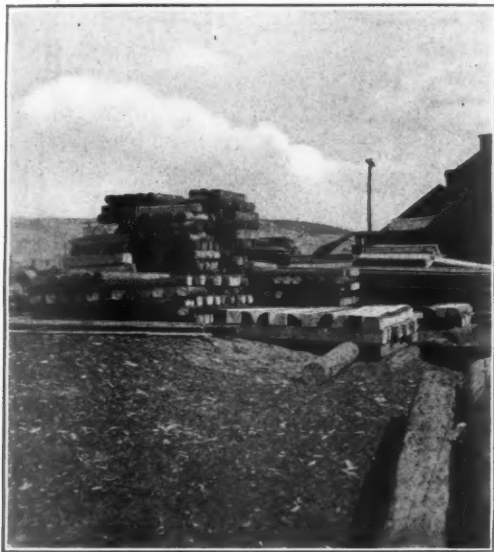
While the great bulk of the dead timber in the National Forests is found in the burned tracts, there are two other classes of dead timber that are of considerable importance, namely, bug-killed, and a third class due to a number of causes.

Fire-killed timber is the most important. It is found everywhere throughout the whole forested area

the Black Hills, S. D., where there are millions of feet. This class of dead timber does not remain sound so long as the fire-killed timber; used within a few years after being killed, however, it proves just as satisfactory as green timber.

The last sort of dead timber mentioned is found scattered everywhere in single trees, but nowhere in large quantities.

It is estimated that there are approximately 5,000,000,000 feet of dead



Mine timbers made from timber burned ten years ago
Leadville, Colorado



Mine timbers made from timber burned thirty-two years ago
Pike's Peak National Forest

timber in the National Forests. Much of this has a wide range of uses. Its lightness and strength commend it to the miner. It is easily handled in the mines and is cheap to ship. For these reasons it is not surprising that the mines of Leadville, Colo., use 350,000 feet of dead timber per month.

Perfectly seasoned and very durable and, as experience has shown, being unimpaired in strength, dead timber has been found satisfactory for use

Dead timber is also useful for telephone and telegraph poles, fence posts, dimension stuff and various other purposes. Large quantities are being used for fence posts; in that it can be shipped farther, it is more desirable than green wood for posts. It is sometimes used for inch lumber, though, on account of its chief defect, namely, the check, it is not satisfactory.

Dead wood is not likely to be af-



Fence posts made from timber burned seven years ago
Pike's Peak National Forest, Colorado

in railroad ties. In the Pike's Peak National Forest many thousands of ties are made from this class of timber every year. Recently there has been developed a demand for it for box and crate purposes. The fire drives all the odor out of the wood and seasons it so perfectly that a package made from it does not warp nor shrink. Where it has been used for this purpose dead timber has given excellent satisfaction, in consequence of which it is likely to be widely used.

ected for many years by decay; in many places most of it is sound after twenty-five years. In some cases, however, it is quite seriously checked, this defect preventing it from being sawed into lumber.

In some places the opinion prevails that dead timber is weaker than seasoned green timber; mechanical tests, however, already made, do not confirm this belief. In the laboratories of the Forest Service, a number of tests of dead timber have been made which show this timber to be much

(Continued on page 383)

WHY THE APPALACHIAN RESERVES ARE ESSENTIAL

Convincing Testimony

From a Physician

From the physician's standpoint the destruction of our forests is not only to be deplored, but strenuously resisted. It robs our people of a great health-giving influence. The heavily timbered White Mountains have long been a resort in which the tired and jaded might obtain rest and refresh-

A Paper Dealer

The establishment of the Appalachian-White Mountain reserves is a good business proposition for the Government. Government is not asked merely to create a park, but to invest in a business enterprise upon which Nature is annually earning the cash interest. Every dollar the Gov-



Franconia Notch in the White Mountains, where some of the most destructive clean cutting is done on the high slopes

ment. To sufferers from pulmonary diseases, life in the White Mountains is highly beneficial. These regions will become increasingly a resort for the growing population of the great Middle West as well as New England, unless despoiled by the selfish, short-sighted spirit of commercialism now so rampant.

VINCENT Y. BOWDITCH,
Boston, Mass. (Physician)
May 20, 1907.

ernment expends will come back to it in time in direct returns. In addition, the Government will be preserving water-powers which are the very life of many large manufacturing enterprises furnishing livelihood to an army of employees.

JAMES RICHARD CARTER,
(Of Carter, Rice & Co.)
Boston, Mass.,
May 15, 1907.



White pine grove in which thinning and pruning has taken place. Plymouth, Massachusetts

A Geologist While employed by the North Carolina Geological Survey, I travelled over much of the South, studying its waterways. I found that most of the rivers, great and small, are filling up



View of a ravine showing the work of trees in holding the soil from washing. The steep slopes and shallow soil are capable of growing good timber

with silt and gravel; the dams are being destroyed, while gravel bars are forming, to the serious detriment of commerce. The great Ohio River is

sides faster than they can be dredged from the rivers.

The cause is in the cutting of forests from the Appalachian Mountains,

A pine forest on the terraces of the Connecticut River, purchased by citizens of Hanover, to save from cutting



being seriously affected. The Government is spending millions in dredging out these channels, but its work is largely neutralized. Silt and gravel are descending from the mountain

The effect is felt directly by those who navigate the streams or use lumber or waterpower; it is felt indirectly by investors, or by users of Southern products, wherever they may live, the

nation or world over. The only remedy is in Government ownership of the forests controlling the sources of the streams.

L. C. GLENN,
(*Vanderbilt University.*)

Nashville, Tenn.,
May 17, 1907.

But these forests have been largely cut, and the ground burned over, rendering reproduction impossible.

The effect is floods in the spring and low water in the summer, seriously impeding river commerce.

The remedy lies with the Government. A forest reserve in the White



Virgin spruce with dense balsam reproduction on Mount Jackson,
New Hampshire

**A Steamboat
Man**

For years I have lived upon the Connecticut, and managed a navigation company. We have had thirty-five vessels, including a line of steamers from Hartford to New York.

When the New Hampshire mountains were clad with forests the river was well supplied with water till mid-summer.

Mountains will save the remaining forests. It will also prove a golden investment for the Government.

C. C. GOODRICH,
(*Vice-Pres. and Gen'l Manager
Hartford & New York Trans-
portation Co.*)

Hartford, Conn.,
May 14, 1907.

Stripping the hills of trees means floods and freshets in the spring and water famines during the remainder of the year. It means a threat to property, if not indeed to life. It means an enforced idleness for many of our people.

CURTIS GUILD, JR.,

(Governor of Massachusetts.)

Boston, Mass.,

April 20, 1906.

mother. I have slept under trees which would make boards wider than this table. Last year * * * there was nothing but huckleberry bushes and blackberry bushes.

I tell you, it makes a man cry. I have watched this thing, and I have been on all sorts of committees about it, and I have concluded that really, with the best intentions in the world, nobody can manage it except the Nation. The Governor will tell you that



Logging the steep slopes in the White Mountains

An Author
and Clergy-
man

I slept in these White Mountain forests before any of you were born. * * * I have known these forests as a man knows his own

the State can not manage it. * * *

France, and every country of Europe, has found out from experience that the Nation must manage the forests. * * * The more you think

about it, the more you see of it, the more you are convinced that it must be a governmental affair, and not the affair of some particular state or particular county, still less, of particular men.

EDWARD EVERETT HALE,
(Chaplain, U. S. Senate.)

Boston, Mass.,

April 26, 1906.

A Manufacturer

New England is largely dependent upon her factories run by water-power. The flow of the rivers furnishing this power is growing yearly more uncertain. Both floods and droughts are more frequent. It is plenty or famine. This situation is due to the pernicious cutting of woods along the headwaters of the New England rivers.



North Sugar Loaf Mountain, New Hampshire, once heavily timbered, but now practically barren as a result of clean cutting and fire

A Wholesale Dry Goods Merchant I have witnessed the slaughter of the White Mountain forests, accompanied by destruction of natural beauty and serious injury of the headwaters of our streams which turn so many spindles and provide employment for so many thousands.

New England, remote from coal fields, is very dependent upon water-powers. I earnestly hope Congress will preserve the forests upon which these powers depend.

AMORY A. LAWRENCE.
(Of Lawrence & Co.)

Boston, Mass.

May 15, 1907.

I have known the Connecticut for over thirty-six years. It drains an area of four thousand square miles. Until recently the wooded hills kept the flow of the river even. Now, in the spring, we have floods, while in the summer the water sometimes will not run our mills.

This is a question in which every manufacturer on the eastern coast of the United States is interested.

THEOPHILUS PARSONS,
(Representing New England manufacturing interests, also cities and towns situated on rivers where water-power is used.)

Boston, Mass.,

May 15, 1907.

A Lawyer In the Carolinas and Georgia there is invested in cotton mills run by water-power alone, over forty million (\$40,000,000) dollars. The horsepower utilized is 105,895. The spindles turned number 2,711,375. They consume annually 892,357 bales of cotton, worth, when manufactured, over seventy million (\$70,000,000) dollars. The hands employed number 60,000. Counting families, 240,000 people are dependent upon these

An Electrical Engineer One of the most important features in the commercial development of a water-power enterprise is the uniformity of flow of the stream on which the development is undertaken. Where streams are subject to severe droughts or great floods, commercial development is practically impossible. Nature has provided for the uniformity of flow by covering the watersheds at the headwaters of these streams with forests. * * * When



View of a deforested hillside, showing effect of erosion, Southern Appalachian region

mills. This vast industry faces destruction. The cutting of the Appalachian forests means its end. A national forest reserve in the Appalachians is the only salvation.

AUGUSTINE T. SMYTHE,
(Attorney and Counsellor.)

Charleston, S. C.,
May 15, 1907.

these forests are cut off, conditions are entirely changed, and great freshets result.

CHARLES A. STONE,
(Of Stone & Webster.)

Boston, Mass.,
April 23, 1906.

A Former Governor

It is sure that if the forests of the White Mountains are leveled; if these hills are exposed to the elements; if the springs and reservoirs are left without the protection of

kindness can then come quickly to our aid, but New England will be alone in the hands of Nature's slow and toilsome process, creeping back through the centuries to the beneficent conditions which she now shares with all



Ex-Governor John M'Lane of New Hampshire

their natural forest cover; in short, if those things take place which only Federal action can avert, we shall see the gradual and certain desolation, not of one city, but of twenty; not of one State, but of five; and no human

the States of the Union."

JOHN M'LANE,
(Former Governor of New
Hampshire.)

Milford, N. H.,
April 25, 1906.





Typical destruction on the high slope side of Mount Moosilauke

WORK IN A NATIONAL FOREST

BY

Charles Howard Shinn, Supervisor Sierra National Forest, Northern Division

No. 2—Among the Shake-Makers

OUT here in California, in our mountains, we learn in some degree how to put ourselves in the other fellow's boots. A thousand times a year that is pounded into a man, or else he comes to unexpected sorrow. You cannot classify other men, and their doings, as if they were documents before you on a flat-top Forest Service desk. Even forms, reports,

It was a millionaire lumberman, a few years ago, who told me: "The shake-makers must be kept out of the timber; they must be put out of business." It was one of the leaders of the old Forest Reserve system of 1902, who told me: "Never, never, will the Government countenance sales of timber to shake-makers." I think that for twenty or more years many and influential people, and newspapers, have been opposed to the whole body of workers in this peculiar but perfectly legitimate local industry.

Naturally the feeling was fully reciprocated; naturally, too, this picturesque clan of mountaineers became, like Bedouin outlaws, proud of their isolation, and perfectly able to cut shakes on Government land when they chose, snake them out uncaught, and loaf the winter through on the proceeds. In all those foolish years, during which the forest officers were not permitted to sell shake timber, shakes were abundant in the valley towns. I heard of a man with a cabin, twelve feet square, who boasted that the Reserve gave him 75,000 free-use shakes in three years. So small and so discouraged was the ranger force, so without maps, or any surveys of the private holdings, that shakes were sometimes cut openly on Government lands in high scorn of the regulations.

Once a ranger put up a sign: "Do not remove these shakes until I survey the line"—and went down to his camp for instruments. He felt pretty safe; he knew the shake-makers; had told them about it; they had promised to wait. He had ridden forty miles that day, over rough country, and had tired two horses. He cooked his supper, went to bed, and slept an hour.



A shake-maker ready to fell his tree

and sub-vouchers have to be translated with heart and soul, as well as with a mechanical intellect, or their true values are lost. Who is it that can (or would) deny the essentially human elements in these blurred, too-often defective, but honest and painstaking Forms 874-2, or 578, 856, and 944, as our rangers send them in from far-off trails and camps?

Suddenly the full moon flung itself out of the pine-forest fringe on the top of Peckinpah Ridge, flooding the whole earth with light; it woke up the ranger; he sat up, and laughed aloud.

"Those fellows might happen to start their shakes right after supper. Guess I'll take a ride."

So, pretty soon, one could have heard the click, click of a horse's shoes on the granite in the canons, and the swish, swish of the branches along the gullies, as the ranger "cut across

ing: "By the way, what *is* a shake-maker; and what *is* a shake?"

In the days of the beginnings, in that unfenced California of sixty years ago, when Boston sent us "knocked-down" houses by clippers around the Horn, and there was not one shingle mill in all our mountains, some of the pioneers swung their axes against the great sugar pines, and found that some of them could be made into long split shingles for the roofing or siding of cabins. I am



Splitting shakes from bolts

the corners," and headed up the road to the shake camp.

Pretty soon he halted a big freight team, piled high with shakes.

"I know those shakes, Tommy; they grew right under my sign. You drive up to my cabin, and pile them against the fence."

"I'll see you in Jericho first!"

"Now, Tommy, this is a serious matter. And you are a good fellow, and I only want to keep you out of a lot of trouble."

So, after more talk, the shake-maker came into line, and offered his "proposition of settlement," and was treated accordingly, from A to Z.

But it occurs to me that all this time I have taken too much for granted. I hear some pensive reader ask-

told that it was a clapboard splitter from Maine who first made shakes at Georgetown, Eldorado County, in 1848, and that they were first used in clapboard fashion, from the ground to the eaves, and right on up to the ridge pole. Some cabins of that sort still stand in the old Bret Harte camps, such as Little Garrote.

The shake-makers made camps in the sugar pine belt, and cut as they pleased, felling tree after tree, in total ignorance of scientific principles underlying the proper choice. Only one tree in from six to ten sugar-pines will split into shakes. The old pioneer way was to cut a tree down, saw a piece off, and try it. One still finds logs of superb sugar-pines, five or ten feet in diameter, which were cut and

left by these earlier gypsies of the tree-killing trade.

"In those days," said an old shake-maker to me, "I sometimes used to cut two or three trees before I got one that would work decently. But then I never did as badly as Mellicker. He was a saloon-keeper down in the valley in 1860. He seen I was makin' lots of money out of shakes, so he gets an axe and hikes for the Ridge, and busts in quite fearless. An' bimeby I meets him, kinder discouraged.

Fortunatus hanging at her girdle. Other men besides those who swung the ax and drove the froe were reckless in those golden times; lumbermen were leaving fifty per cent of their timber on the ground; shepherds, cattlemen, road-builders, miners, all wasted like Russian princes.

When I came to the Sierra Forest, I brought with me the conventional prejudice against the shake-making business. I had seen and heard too much of its wasteful methods all



The old shake-maker's cabin

"See here, Pike," he says to me, "I've worked two months, and cut down thirteen whales of trees, and there hain't one of the bunch that I can split into shakes."

"Then Mellicker went home," continued the veteran of the froe, "an arter he left I went 'round an' worked up three of them trees he downed; but the Angel Gabriel couldn't have worked a fourth."

Stupid? Foolish? Why yes! but please remember that those were the rollicking days when California was young, and lavish, with the purse of

along the old mining belt. What dear old Dr. Gally, of Nevada, used to call "That sentimental, California, long-tom-and-rocker literature," had glorified for thirty years or more the prospector, the placer-miner, the gambler, the whiskey seller, and had described the shake-maker as black with original sin and sticky with the juice of murdered pines.

Timidly came to my camps a little, ineffective man, singularly elusive and silent, to see if he could buy some trees from the Government and make shakes. We went together through

the forest, visited old shake-camps, gathered up unwritten histories, met the guild of froe-wielders, handled famous froes (the heavy, home-made riving knife, as dear and as personal to a true shake-maker as his Toledo blade to a Spanish grandee). And so, in the end, I was able to understand the shake-baker's point of view, that he, a plain mountaineer—who had greatly improved his methods, had learned how to test a tree before felling it, and was willing to pay the Government a higher price for the timber he could work than any mill man would pay—was entitled in equity to a chance to live, and to support his family in his own way.

So it happened three or four years ago that all of us, out here in this forest, began to study the "shake problem" at first hand—not from books and ancient prejudices.

In order to make this whole subject clear to my readers let us pause a moment, just here, to look at the elements involved. The heart of the problem is the sugar-pine. *Pinus Lambertiana* is the finest pine on earth, and even challenges the giant *Sequoia* itself. So tall, well-shaped, bright and great are its shafts, so luminous and graceful its sunlit branches, that all our other pines seem plebeian beside them. There is nowhere a pure stand of sugar-pine, whose beautiful, soft, even, light-colored wood easily outranks all other western timbers in market value. It is possible in time to increase the percentage of sugar-pine in many forests, but it will never predominate.

The modern shake-maker chooses a mature sugar-pine with thin, homogeneous bark, and "chips" it, high up; he studies the "twist" and fiber until he is satisfied that it will "work," and then he fells it, and saws it up into lengths. These huge blocks are usually thirty-two inches high, and may be ten feet across. Next, he marks and splits them off, into "bolts" or pieces five or six inches square, and these are then riven into shakes. A first-class

shake is thus a nearly uniform split shingle thirty-two inches long, five or six inches wide, and from one-sixth to one-fourth of an inch thick. It is fragrant, clean, glossy, and of exquisite softness and color. Shakes make a more durable and artistic roof than any sawn shingle, and readily take paint, stain, or oil. They sell in the woods, for five or six dollars a thousand, or in the valley towns for thirteen or fourteen dollars.

As soon as the trunk of the tree is worked up to the branches, the shake-maker cuts shorter shakes between the knots, usually of twenty-four inches, and in this way is enabled to utilize the greater part of the tree. He leaves much heart-wood, or "core," as he calls it, and fragments of every description, but in these days a careful man works much closer than formerly.

Thus what we have is skilled and specialized labor; a man who makes choice shakes hates to do anything else, cannot earn half as much by other work, loves the camp-life, the freedom, the elements of uncertainty—in brief, the whole thing.

There are perhaps fifty men in this region who are "natural shake-makers;" they are the pick of ten or fifteen thousand people, who have tried the game in the past forty years. Some are white-haired men of seventy, and others are gay young rowdies of twenty. Some cannot sign their own names; while some are of famous families, or once held notable places in the world of affairs.

When I gather these men about me, and listen to their hopes and fears, I find my sympathies strangely stirred. Their tools are saw, ax, and froe, their capital for the summer work is usually less than one hundred dollars apiece. If they can only get the timber, they can make a living out of a summer's work—and, there ambition ceases. Still, it seems to me that in time some of them will "branch out," grow a little, hire a few helpers, cut some posts, ties and grape-stakes, aid

us in handling "short stuff," and start shingle-mills, etc. Some of their children will make first-rate rangers.

The plan finally evolved for shake-making here, is about as follows: We have surveyed, estimated and advertised a piece of timber so scattering, rocky, and difficult of access, that lumbermen will not want it for years. Five or six shake-makers now have a road into the place, have built cabins, and each man has bought from the Government 500,000 shakes. The land is marked off into "forties," and one is assigned to each man; he begins at a designated point and "works" the pines he finds on that forty which will make shakes. If he is still short on his quota, a ranger lets him begin on another forty. In this way the ground is worked clean, from a shake-maker's standpoint; the branches are lopped and piled; and waste logs which cannot be utilized by the shake-maker, are trimmed and left. In such a case as this there will be perhaps two saw-logs left in the top for which the shake-maker has paid.

All this is merely an experiment. The shake men think they are paying too much and are too much hampered by regulations. The adjacent mill-men think we are too easy on "those vagabonds." There will be numerous readjustments before the system is perfected. At present, it is but the beginning of systematic control of this local industry. But in 1902 no shakes were sold—they were stolen or given away. In 1904 a few shakes were sold, at prices that brought the Government about fifty cents per thousand feet B. M. for sugar-pine! In 1907 we are selling 2,500,000 shakes, at prices bringing about \$5.00 per M. for our timber.

It was only the other day that I met some of the shake men in their camps. They were happy-go-lucky, delightful grumblers, as of old. Friendly and hospitable they were, and it was hard to tear one's self away. But my memory runs back to some of our "shake-maker" difficulties of less than five years ago, and I can hardly believe that some of the very men who then made us trouble, were to-day begging me to "stay a week and go a-fishing."

There was the W. and M. case. W. was a strapping mountaineer, who hired out to M., and the latter failed to pay the promised wage. Then W. took M.'s own shotgun, ran him off, and took the ranch. M. found a lawyer, turned in his deeds for lieu land under the Act of June 6, 1900, and faded out of the story.

But the ranch (now Forest property) was a mighty poor one for farming, and W., a trespasser, had no way to live except by making shakes. We picked him up one day, crouching in the brush below the trail, armed to the teeth, and waiting to shoot whomsoever interfered. We sent him to the insane asylum a little later, sold the confiscated shakes, and turned the ranch into a ranger camp. But I never saw better work than when one ranger made conversational play over the battery of this dirty and sulky giant of a mountaineer, while another leather-stocking slid silently to the rear and took a gentle but firm hold of his rifle barrel!

Let us now sum up the whole shake-maker situation (you will remember how that friend of our boyhood, Robinson Crusoe, used to place in parallel columns his blessings and curses):

THE SHAKE INDUSTRY vs. THE FOREST.

Against.

It has a bad reputation, and sometimes deserves it.

Its methods are extremely wasteful.

It uses only the best timber.

It leaves lots of fragmentary waste.

It "spoils the market." Mill men will not buy timber that has been "picked over."

"They are a lot of worthless bummers and brigands."

It is really a dying industry. Why encourage it at all?

On the whole, does it not look as if a Forest of three million acres, extending over portions of five counties, could afford to give "shake-rivers" their chance to live?

Wrote to me once a man who claimed to "speak for the people of California": "It is wrong for the Government to sell timber at high prices to the wicked lumber baron. The Government ought to sell all its timber at fifty cents a thousand to poor men (like myself), and so break the lumber trust."

Said to me once at Lake Tahoe, a wealthy lumberman: "The only business way for you Forest men to handle the Government timber is to sell all you have in California to the highest bidder, and let him have all the time he needs to cut it, according to the market."

How beautifully simple all such plans as these! How curious it is that so many people want one to give them an "inside chance," at the game of life. How easily short-sighted Foresters might sow the wind and reap the whirlwind! What need there is for patience, firmness, and especial care to adjust conflicting interests!

For.

But it is a legitimate local industry and strongly supported by the community.

Not now: the best modern shake-makers show up very fairly with other ax-men.

But it pays much the highest stumpage.

But the waste is piled and put in shape; campers use it for fire-wood; when mills come in they saw the "tops."

But they do buy such timber, every day in the year, from private owners.

But on trial they prove to be very good men to deal with.

But the shake-men are capable of making posts and ties, of running shingle mills and working up "short stuff." Give them time to "bridge the gap," and to meet changing conditions—when they do change.

Lastly, how swift and complete will be the ruin of the Republic if men forget the mighty principle: "To every man a fair chance, according to his abilities, under an equal law, just and fearless."

Said Lowell, in the "Washers of the Shroud," in superb warning:

"Hath he let vultures climb his eagle's seat

To make Jove's bolts purveyors of their maw?

Hath he the Many's plaudits found more sweet

Than Wisdom? Held Opinion's wind for Law?

Then let him hearken for the doomster's feet!

"Rough are the steps, slow-hewn in flintiest rock,

States climb to power by; slippery those with gold

Down which they stumble to eternal mock;

No chafferer's hand shall long the sceptre hold,

Who, given by Fate to shape, would sell the block."

WHY AMERICANS CUT DOWN THEIR FORESTS

BY

C. H. Goetz, Michigan Agricultural College

THIS article will deal with some of the causes that have destroyed and are destroying the forests, and, in many cases, good agricultural land, in the United States.

That our forests are so wantonly cut down is not because the people of the United States do not love them, nor that they want to realize great wealth or get more cultivated fields. There are other causes that tend to destroy the forests. First in order is the unjust taxation of timbered land, as it exists in nearly all the States of the Union; second, the tariff placed on foreign timber; and, third, the selling by the Government, both National and State, of land as agricultural which is fit only for the raising of timber.

As to the first cause, no law of taxation has ever worked so ruinously to our forest interests as the law that taxes the value of timber on the stump the same as any other value of private property.

From nearly all of the States of the Union examples might be cited of cases in which men have been forced to destroy their forests in order to escape high and ruinous taxation. As an example, let us take one case of the thousands of these. A man near Grand Rapids, Mich., has eighty acres of mixed hardwood timber, the pride of the township and county in which he lives. This man has about sixty acres of agricultural land from which he can not make a profit large enough to pay the heavy taxes on his timbered land, levied by an honest assessor, and at the same time keep his family and himself from starving. All this is because his eighty acres of hardwood timber is valued on the stump at from \$25,000 to \$30,000.

Now his crop is not ripe enough to cut; in addition, he wishes for many reasons to preserve the forest for some time, as an ornament to the county and for future profit. Yet, in order to escape the high rate of taxation levied upon his whole forest area he is compelled, under the present system of taxation, to cut the timber, either in part or entirely, before it is ripe and just in the prime of its growth. He is practically forced to sell either his timber crop or his farm.

On his various agricultural crops this man is not taxed while they stand in the field; instead, he is taxed on the value of the land. Why should he be taxed on his forest crops while they stand on the soil? A tax on his crop when it is harvested would be a just tax, and a tax on the land that grows the forest crop would be a just tax, but a tax on unharvested forest crops sets a premium on the destruction of our forests; and the sooner our State legislatures will see this and remedy it, the sooner will our States and the United States preserve some of their beautiful forest lands for economic use by those who will come after us, and who will call us blessed for our forethought.

The second cause, the protective tariff on timber, is the most harmful of all the laws working toward the destruction of our forests, and it would become our National legislature to repeal or change it. There can be no cry of "protection to infant industries," for the lumber industry has grown to be a giant, and has in many States left nothing but stripped, treeless wastes in its wake. It is self-evident that every dollar paid by the foreign lumber dealers in the way of a tariff comes out of the consumer's

pocket, and at the same time both restricts importation and also tends to a greater consumption of our own forests. Do we need a tariff on an article which is already becoming scarce in our country?

The third cause, the selling by the States and the United States of abandoned forest lands, and other waste lands fit only for forest production, to settlers as agricultural land, is not only throwing a bad repute on agricultural industries, but is costing the States every year more in advertising and marketing said lands than is realized from them, and in the end they are returned again to the State as delinquent tax lands. They are not, however, returned in as good condition, for whatever second growth of timber or other value there was on the land has been destroyed or harvested, leaving the land in much poorer condition than when sold.

Would it not be a better policy for our State legislatures to enact laws for the holding of all such lands, to give these lands protection and proper management under competent foresters, and use them as nuclei for State forests, which might in time raise the much needed materials to keep our

wood-working industries running? Then each State might have a forest after the pattern of our National Forests; and in place of having desert land we would again possess the once beautiful forest regions, which would protect our cities in the valleys from flood water, and ameliorate our climates. We would then hear less about rivers breaking their banks, and destroying life and property.

It is high time that our people awake up to the fact that our country is fast losing what was once her pride and great natural resource, and that the destruction of the forests has brought with it the floods and drought, and destruction of much valuable agricultural land.

If these three causes detrimental to our forest growth could be removed, and the above suggestions followed, our policies would soon stand but little behind those of European countries; and seventy-five or one hundred years from now our States would again have an income from their forests which, at the present increase in lumber prices, would make them rich, and render it unnecessary for them to import timber from abroad to keep their manufactures going.

DEAD TIMBER IN THE NATIONAL FORESTS

(Continued from page 366)

stronger than has been commonly supposed. From these tests it may be safely concluded that, where the green timber is seasoned to the same extent as the dead, the dead timber has about ninety per cent of the strength of the green. In its unseasoned state, green timber is about one-half as strong as sound dead timber.

In conclusion it should be distinctly understood that sound dead timber, and particularly sound fire-killed timber, has decided value and that it keeps this value for a considerable length of time. Decay does not readily affect it, and its strength is not impaired by standing in the dead condition.

The strong prejudice existing in localities against dead timber must be attributed solely to lack of knowledge

of the real value of this timber. The term "dead timber" is loosely used, and is made to include timbers killed in all manner of ways and found in all stages of decay. The good and bad are indiscriminately classed together. The prejudice, however, against this timber must disappear in the presence of facts. In certain localities it is already widely used, while, under mechanical tests, it develops material strength. Such timber, if sound, is perfectly seasoned, very light, easily handled and cheap to ship.

Necessity, it is true, was chiefly responsible for the original use of dead timber; this use, however, has developed the real value of this material and has shown its capability of wide and varied service.



Government Irrigation Work During the Month.

The Belle Fourche Opening

The Secretary of the Interior has reserved portions of four sections of land in South Dakota for town-site purposes in connection with the Belle Fourche irrigation project. It is expected that water will be turned into the Belle Fourche canal for the first time about July 4, but the formal opening which was planned has been postponed. The heavy floods which recently visited the valley carried out highway bridges in all directions, and it is impossible to replace them in time for use on that occasion. Some water may be available for irrigation purposes this summer. It is expected that a part of the irrigation system will be ready for regular service at the opening of the irrigation season of 1908.

Belle Fourche

The greatest flood in twenty-four years on the Belle Fourche River occurred on the 26th of May after five days of heavy rainfall. The bottom lands in the valley were flooded and much damage was done to private property. It is gratifying to the Reclamation Service to learn that the new dam across the river stood the test splendidly, the only damage being the displacing of a small amount of riprap below the sluice gates. The big canal in process of construction carried a stream of water eleven feet deep for nearly half a day.

A Flood in the New Canal

An extension of time has been granted to the contractor for the construction of the Leasburg diversion dam and canal, Rio Grande irrigation project, New Mexico. The delay was caused by a flood which broke into the excavation for weir foundation, leaving a deposit of mud which had to be removed. As the old canals were able to get water from the river through the old headings the delay will not cause any serious damage to the water users.

Delayed by Mud Washing in

Mr. Ralph B. Williamson, of Oregon, has been appointed Assistant United States Attorney for cases needing immediate attention in connection with the Sunnyside canal and irrigation project. Mr. Williamson is authorized to bring injunction proceedings against the unlawful taking of water from the Sunnyside canal or its laterals, whenever called upon to do so by the engineer in charge.

Hitherto when individuals have broken the headgates, ditches, or measuring boxes for the purpose of taking more water than their allowance in the low water season, no relief could be obtained for several days, as the United States attorney resides nearly two hundred and fifty miles from North Yakima. The matter of protecting the water supply is of the utmost importance to the settlers. Without it, the Government reclamation work would largely fail of its purpose.

Carlsbad Irrigation Project The rules and regulations of the Carlsbad irrigation project close with the following:

"All persons using water will be expected to try and improve methods whereby the water may be increased, and liability of injuring lands and crops decreased. The officials of the Reclamation Service in charge will aid in bringing, by all legitimate means possible, this project to the highest state of prosperity."

Actual Settlers It is now the settled policy of the Government, when land is being released from withdrawal, to open it first to settlement; and then open it to entry (that is, to the filing of claims in the land office) only after a period of from ten to thirty days. The purpose of this is to give an advantage to the bona fide settler. The man who is on the ground first, and actually living there, is given preference under the law over any one who comes afterwards, and who might try to take up land for timber or mineral purposes under color of homestead entries. It is well known that this is often done; hitherto it has been difficult to prevent. The present policy will render enforcement of the law more easy.

Certain lands in connection with the Minidoka project, Idaho, which are found unnecessary for that project,

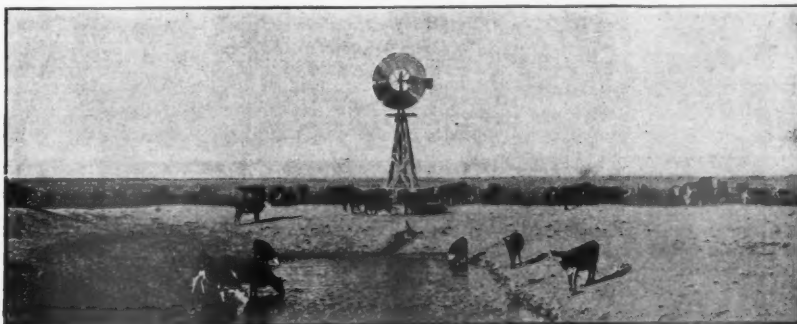
have been restored to the public domain, and will be subject to settlement after August 12, 1907; but in accordance with the policy noted above, will be withheld from entry and filing until September 11.

In the same way forty-eight sections of land under the Yakima project, Washington, have been restored to the public domain, but will not be open to settlement until a time set by the Secretary.

Eighteen sections of surplus land under the Truckee-Carson project in Nevada have been opened to settlement, and will be open to entry and the filing of claims after thirty days from such date as the Secretary of the Interior shall name.

La Plata Project Abandoned After thorough surveys and examination it does not appear practicable or advisable for the government to undertake the construction of the La Plata irrigation project, which lies in northwestern New Mexico and southwestern Colorado. Secretary Garfield has therefore restored to the public domain more than three hundred thousand acres of land withdrawn April 20, 1905, in connection therewith.

These lands will become subject to settlement on such date and after such notice by publication as the Secretary of the Interior may prescribe, but shall not be subject to entry until after thirty days from the date so fixed.





The Month in Government Forest Work.

Land Released from Forests

Large releases of forest land from temporary withdrawal have been made by the Forest Service in the past month. It will be remembered that when Congress took from the President the power to create new National Forests in the six States—Washington, Oregon, Idaho, Montana, Wyoming, and Colorado—Mr. Roosevelt, before signing the bill, established in those States large areas of forests that had been already under consideration for sometime. Sufficient land had previously been withdrawn to allow for these new forests. After their boundaries had been definitely fixed, the remaining land, that which was found more suitable for agriculture, had to be restored to entry. This has now been done, and withdrawn land has been completely cleared up in all the six States named. The greatest acreage was in Colorado, amounting to 1,003,140. In Montana there were 788,300 acres; in Oregon, 628,480; in Idaho, 295,730, and in Wyoming, 64,480. The release of the lands no longer needed will meet with approval in the West.

In California also some 133,120 acres adjoining the San Jacinto Forest were released. This forest has been extended, and the release completes the action.

Th largest release was in Alaska. Away up on the shores of Norton Sound, on the west coast of that Territory, 3,500,000 acres had been withdrawn to see if the care of a forest

there would be helpful to mining interests. But careful examination showed that the sparseness of the timber and the situation of the mining works were such that it was not worth while.

A National Forest in Arkansas

Not only in the Rocky Mountains is there opportunity for forest reservation on land already belonging to the Government. In nearly all the States west of the Appalachian Mountains there is a small amount of public land still remaining, and in Arkansas it appears that there is enough to make an extensive forest. About 630,000 acres have been withdrawn from entry for this purpose. This is not all in one body, but the parts are near together. They lie in the Ozark Mountains, in the western part of the State, in the counties of Perry, Yell, Scott, Polk, Pike, Montgomery, Garland, and Saline.

Profit in Illinois Woodlands

Soil and climate in Illinois are favorable to tree growth. There are over one hundred and eighty species found. Comparatively few species, however, can be grown on the better soils in competition with farm crops. The Forest Service has made a field study to ascertain the kinds of trees best adapted to the prairie sections of the State. Over one hundred plantations were examined, and the yield and value of posts or poles per acre was computed.

Detailed results and consequent recommendations are embodied in Circular 81 of the Forest Service, "Forest Planting in Illinois," which will be sent free on application.

The best paying trees found were catalpa and larch. Two plantations of catalpa paid \$9.35 and \$16.70 respectively per acre. Two of the larger plantations paid \$7.00 per acre. A considerable number of each of these paid more than \$4.00 per acre annually.

Water Charge Rumors False Farmers in the West have been alarmed over a rumor that the Forest Service was planning to charge for water used for irrigation purposes.

This rumor is wholly without foundation. It probably originated in the charge which electric power companies are required to pay for use and occupancy of lands in the National Forests for reservoir sites, conduit rights of way, and power stations. This charge is solely for the use of lands and not at all for water. Forester Pinchot, in a letter to Hon. Edward T. Taylor, of Glenwood Springs, Colorado, says he does not believe that there ever should be or ever will be a charge for water for irrigation.

In the case of irrigation projects, the Forest Service does not even charge for the use of lands for reservoirs and canals.

Miscellaneous Forest Service Notes Squatters who have settled on National Forest land before it was withdrawn from entry have the first right to occupy the land and afterward file claims, if it is found to be more suitable for agricultural than for timber land.

Mr. Pinchot, Chief of the Forest Service, is spending part of June in Idaho. His contact with the people living near the National Forests tends

to clear up misunderstandings and make friends for the Forest Service.

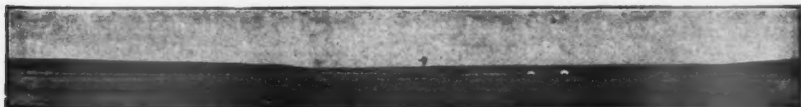
Trees to the number of 170,000 have been ordered for the Garden City Forest Reserve in Kansas. The trees will cover 170 acres. All are hardy species; black locusts and pines predominate.

Brick manufacturers are taking the Forest Service statistics on the scarcity of timber as an encouragement to the use of brick. It is true that building materials other than lumber are coming into more and more demand. In addition to brick there is now an immense amount of reinforced concrete construction for the most varied purposes.

Control of Forest Fires The Forest Service has recently issued Circular 79, Control of Forest Fires at McCloud, Cal. This tells of experimentation in methods of control. The first step is the clearing of fire lines from 200 to 400 feet wide in which all the slash and debris are burnt so that fires can not cross. Fifteen miles of fire lines were cleared, which gave a protection to 15,000 acres of cut-over land at a cost of 1½ cents per acre.

The next main point is to discover and extinguish fires as soon as started, since few fires are hard to control during their first stage even in the thickest forests. It was found that one patrolman could cover 40,000 acres daily. The route was laid out to give the best view of all parts of the territory, and tool houses were placed at convenient intervals. The patrol expense was about 1½ cents per acre.

The result was that few fires started, and they were speedily discovered and extinguished by the patrolman without assistance. Equally good protection can be given to woodlands in other sections, though of course each local forest has conditions of its own.





Philippine Woods. Bulletin 4 of the Department of the Interior, Bureau of Forestry, Philippine Islands, by Roland Gardner, manager of the Timber-Testing Laboratory.

I. Mechanical Tests, Properties and Uses of Thirty Philippine Woods.

II. Philippine Sawmills, Lumber Market, and Prices.

Part I begins with a popular discussion of the qualities of woods, and meaning of timber tests. In this discussion the author defines in clear and simple language the various strength functions and the mechanical properties of wood. This is followed by a description of material used for testing and a brief discussion of the methods of test. The methods of test conform to those used by Professor Johnson in his investigation of American woods. The tabulated results are complete and comprehensive, giving the strength of each species for three different moisture conditions: over 39 per cent, between 25 and 35 per cent, and below 20 per cent.

This part is concluded by an interesting discussion of the structural properties and appearance of the different species tested, and a comparison of Philippine, Borneo, and American woods.

Part II is a brief discussion of the sawmill facilities, lumber market, and prices.

The publication is a valuable addition to knowledge upon the strength of commercial timbers, and gives the reader a good conception of the timber resources of the Philippine Islands.

McG. C.

NOTES ON PUBLICATIONS.

Shields's Magazine for May has an account of some successful experiments in turpentine in Florida.

The Chautauquan for June has an article on Pennsylvania Forestry Camps for Consumptives, and another on Recent Park Development.

The New Jersey Agricultural Experiment Station has issued Bulletin 202, Forest Trees of New Jersey, giving cuts and descriptions of many species, with a list of the forestry papers in State reports, and the New Jersey laws upon forestry.

A fresh list of the publications by the U. S. Experiment Station is at hand. Amongst these is noted Bulletin 149, Studies of the Food of Maine Lumbermen. Men in the lumber camps are shown to eat large amounts of food. Dietary studies and digestion experiments were made.

Circular 80 of the Forest Service describes experiments in the fractional distillation of coal tar creosote. Timber preservation is becoming increasingly important, and the preservation experiments by the Forest Service are becoming a more significant part of its work; hence it is extremely necessary to have the best possible analyses of the creosote used. In Bulletin 72 of the American Railway Engineering and Maintenance of Way Association, there is a voluminous discussion of the best way of analyzing creosote. On this subject there is a wealth of divergent opinion, but only rather meager experimental data. The results of the Forest Service experiments include the influence of the vessel used, the rate of distillation, and the temperature, upon the fractional distillation of creosote, and three leading sources of error.

Among the more recent of the leaflets issued by the Forest Service on various trees for planting are those treating of the hardy catalpa, black walnut, osage orange, black cherry and sugar maple. There are about forty of these leaflets which can be obtained by applying to the Forest Service, Washington, D. C. General literature on the planting and care of woodlots can also be obtained; the Forest Service will co-operate with land owners in the formation of forest plans, and can sometimes send an agent to give personal advice. Thus private woodlands as well as public forests are promoted as helping to make up our forest resources.

A third edition, revised, has been brought out, of Circular 36, The Forest Service, What It Is and How It Deals with Forest Problems. This is for free distribution.

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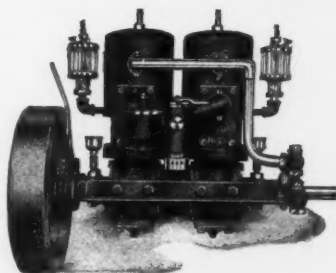
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